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ABSTRACT

Proceedings of an international conference on open education cover five themes: philosophy and concept, development trends in international perspective, dichotomy of equity and quality, graduates' employment, and the management challenge. Among the 41 conference papers and authors are: "The Idea of an Open University" (Preeda Pattanathabutr); "Open Higher Education: Philosophy and Concept" (Lewis R. B. Elton); "International Association for Community Development" (Pierre Rozen); "Open Higher Education: The Mainstay of Universal Access (Pornchulee Achava-Amrung); "A Philosophical Conceptual System of Lifelong Open Higher Education of National Development: A Peaceful Approach" (Weerayudh Wichiarajote); "Distance Education: Concept, Philosophy, and Approach" (K. L. Kamal); "Open Higher Education: From Open Admissions to Open-Minded Person" (Paitoon Sinlarat); "Open Higher Education: Development Trends: An International Perspective" (Robert McCaig); "Impact of Media and Technology on Open Higher Education in India" (Y. B. Mathur); "Radio and Television Universities in China" (staff of Central Radio and Television University, China); "The Adaptability of the Radio and TV Universities to Society" (Tang Yi); "Strategies for Development of Curriculum, Personnel, and Instructional Materials" (Ali Bin Ahmad); "India's Experiment in Open Higher Education: A Study of Andhra Pradesh Open University" (R. S. Ramachandran, V. S. Prasad); "The Dichotomy Between Equity and Quality" (Udom Warotamasikkhadit); "Equity and Quality: Must There Be a Dichotomy?" (Lewis R. B. Elton); "The Development of Experiential Learning Programs for the Open University" (Frederick Baker); "Distance Education in Canada: Toward a Typology of Learning Activities for Adults" (John P. Minnis); "Computing in Open Higher Education: Some Lessons" (Christ Sauer); "Open Higher Education and Graduates' Employment" (Michael Debeauvais); and "Open Higher Education: The Management Challenge" (Lloyd McCleary). A conference program and names and addresses of participants are provided. (SW)

ED275280



PROCEEDINGS INTERNATIONAL CONFERENCE ON OPEN HIGHER EDUCATION

- * PHILOSOPHY AND CONCEPT
- * DEVELOPMENT TRENDS
IN INTERNATIONAL PERSPECTIVES
- * DICHOTOMY OF EQUITY AND QUALITY
- * GRADUATES' EMPLOYMENT
- * THE MANAGEMENT CHALLENGE

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RAMKHAMHAENG UNIVERSITY

BANGKOK, THAILAND

AUGUST 13 - 17, 1984

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TO THE READER

In the latter part of 1983, administrators and instructors of Ramkhamhaeng University, Thailand's and one of the world's largest, undertook planning for an international conference of "open higher education." With the helpful coöperation of United Nations agencies, studies were made, brochures written, and invitations sent out to professionals prominent in this new and growing field of education.

In August of the following year, the conference became a reality. Its weeklong sessions, attended by delegates and observers from all over the world, were held in a prominent central Bangkok hotel and on the host university's two campuses as well as at a newer "distance education" university in the Thai capital. By all accounts the conference went far to establish a working rapport among the world's disparate institutions dedicated to open and distance education.

Not least of the group's accomplishments was the opening of a dialogue concerning definition of the terms "open higher education" and "distance education," for these many organisations cover a wide field of educational experiment and endeavour. The reader will discern for himself the dimension of concern and interest of these educators embarked on the grand attempt to open to the populations of their countries the gateway to learning.

Pat Noisaengsri
Secretary-General to the Conference

CONTENTS

Programme	1
List of Participants	6
Welcoming Address	17
<i>Prof. Sukhum Nualskul, Rector, Ramkhamhaeng University</i>	
An Invitation	18
<i>Dr. Pat Noisaengsri, Vice Rector, Ramkhamhaeng University</i>	
Opening Report	19
<i>Prof. Sukhum Nualskul, Rector, Ramkhamhaeng University</i>	
Opening Address	22
<i>H.E., GEN. Prem Tinsulanonda, Prime Minister of Thailand</i>	
Keynote Address	24
The Idea of An Open University	
<i>Mr. Preeda Pattanathabutr, Minister of University Affairs</i>	
 Plenary Session I : Philosophy and Concept	 29
Main Paper :	
Open Higher Education : Philosophy and Concept	31
<i>Dr. Lewis. R.B. Elton, England</i>	
Supporting Papers :	
International Association for Community Development	45
<i>Dr. Pierre Rozen, Belgium</i>	
Open Higher Education : The Mainstay of Universal Access	46
<i>Dr. Pornchulee Achava-Amrung, Thailand</i>	
A Philosophical Conceptual System of Lifelong Open Higher Education of National Development : A Peaceful Approach	51
<i>Dr. Weerayudh Wichiarajote, Thailand.</i>	
Distance Education : Concept, Philosophy, and Approach	98
<i>Dr. K.L. Kamal, India</i>	
Open Higher Education : From Open Admissions to Open-Minded Person	100
<i>Dr. Paitoon Sinlarat, Thailand</i>	
 Plenary Session II : Development Trends in International Perspectives	 105
Main Paper :	
Open Higher Education : Development Trends-An International Perspective	107
<i>Dr. Robert McCaig, Australia</i>	
Supporting Papers :	
Impact of Media and Technology on Open Higher Education In India	124
<i>Dr. Y.B. Mathur, India</i>	
Radio and Television Universities in China	128
<i>Staff of Central Radio and Television University, China</i>	
The Adaptability of the Radio and TV Universities to Society	135
<i>Mr. Tang Yi, China</i>	

Strategies for Development of Curriculum, Personnel and Instructional Materials	139
<i>Dr. Ali Bin Ahmad, Malaysia</i>	
India's Experiment in Open Higher Education : A Study of Andhra Pradesh Open University	150
<i>Prof. R.S. Ramachandran</i>	
<i>Dr. V.S. Prasad, India</i>	
 Plenary Session III : Dichotomy of Equity and Quality	 159
Main Paper :	
The Dichotomy Between Equity And Quality	161
<i>Dr. Udom Warotamasikkhadit, Thailand</i>	
Supporting Papers :	
Equity and Quality : Must There Be A Dichotomy?	167
<i>Prof. Lewis R.B. Elton, England</i>	
The Development of Experiential Learning Programs for the Open University	172
<i>Dr. Frederick Baker, U.S.A.</i>	
Distance Education in Canada : Toward a Typology of Learning Activities for Adults	178
<i>Dr. John P. Minnis, Canada</i>	
Computing in Open Higher Education-Some Lessons	191
<i>Dr. Christ Sauer, Australia</i>	
 Plenary Session IV : Graduates' Employment	 203
Main Paper :	
Open Higher Education and Graduates's Employment	205
<i>Dr. Michel Debeauvais, France</i>	
Supporting Papers :	
Open Higher Education and Graduates' Employment :	
The Case of Sukhothai Thammathirat Open University	217
<i>Dr. Iam Chaya-Ngam, Thailand</i>	
Higher Education and Graduates' Employment in Developing Countries With Special Reference to India	228
<i>Dr. Manjusree Pal, India</i>	
Trends and Issues of Employment in Higher Education in Thailand	233
<i>Dr. Thamnoon Soparatana, Thailand</i>	
The Employment of Open Higher Education Graduates	257
<i>Dr. Kowit Vorapipatana, Thailand</i>	
 Plenary Session V : The Management Challenge	 261
Main Paper :	
Open Higher Education : The Management Challenge	263
<i>Dr. Lloyd McCleary, U.S.A.</i>	

Supporting Papers :

Australian/Malaysian Collaboration in Teaching University Mathematical and Physical Sciences at a Distance	291
<i>Dr. Patrick Guiton, Australia</i>	
Open Higher Vocational Education in New Zealand	303
<i>Dr. E.I. Jones, New Zealand</i>	
Developing University Support for the Diverse Needs of Students in Open Colleges and Universities : U.S.A.	327
<i>Prof. Elaine Haglund, U.S.A.</i>	
Education in Technical Subjects Through Open Universities	334
<i>Dr. B.S. Jain, India</i>	
Current Status of Distance Education in Korea	338
<i>Dr. Syngnan H. Kim, Korea</i>	
How the People's University of China Continuously Raises the Quality of Higher Correspondence Education	353
<i>Dr. Zhou Jian-Shu, China</i>	
Ramkhamhaeng University: The Management Challenge from Present to Future	358
<i>Dr. Pat Noisaengsri, Thailand</i>	
Ramkhamhaeng University : An Overview	364
<i>Dr. Tuanjai Ketsa and Others, Thailand</i>	
Education Abroad : TV School for 500,000 Thais	374
<i>Mr. Ben Barber, Thailand</i>	
Teaching a Cast of Thousands	376
<i>Mr. Ben Barber, Thailand</i>	
Summary Remarks :	379
<i>Dr. Pat Noisaengsri, Thailand</i>	
Closing Remarks :	381
<i>Dr. Mohammad Selim, UNESCO, Thailand</i>	
Closing Address :	383
<i>Prof. Sukhum Nualskul, Thailand</i>	
Appendix :	385
International Keynote Speakers	387

CONFERENCE PROGRAMME

SUNDAY, 12 AUGUST 1984

14:00 - 17:00 hs.

Registration at Mezzanine Floor

MONDAY, 13 August 1984

7:00 - 8:45 hs. (Vibhavadee, Lobby Level)

Conference Registration

OPENING CEREMONY

8:45 hs. (Vibhavadee Ballroom B)

Assembly for Opening Ceremony

9:00 - 10:30 hs. (Vibhavadee Ballroom B)

- Arrival of the Prime Minister :
H.E. Prime Minister Prem Tinsulanonda
- Report by Sukhum Nualskul, Rector of
Ramkhamhaeng University, Bangkok, Thailand
- Presentation of Certificates of Appreciation
- Opening Address by
H.E. Prime Minister Prem Tinsulanonda
- Departure of the Prime Minister

WELCOMING ADDRESS

By Sukhum Nualskul, Rector of Ramkhamhaeng University, Bangkok, Thailand.

KEYNOTE ADDRESS

Chair : Pat Noisaengsri, Vice Rector for Academic Affairs, Ramkhamhaeng University, Bangkok, Thailand.

Keynote Speech : Roles and Importance of Open Higher Education

by Preeda Pattanathabutr, Minister of University Affairs.

- Refreshments

10:45 - 12:00 hs. (Vibhavadee Ballroom B)

PLENARY SESSION I : PHILOSOPHY AND CONCEPT

Chair : Pat Noisaengsri, Vice Rector for Academic Affairs, Ramkhamhaeng University, Bangkok, Thailand.

Keynote Speech : Philosophy and Concept of Open Higher Education

by Lewis R.B. Elton, Head of Institute for Educational Development, University of Surrey, England.

Commentators : Thong-In Vongsothorn, Vice Rector for Development and Planning, Sukhothai Thammathirat Open University, Bangkok, Thailand.

: Uthai Piromruen, Dean, Faculty of Humanities, Ramkhamhaeng University, Bangkok, Thailand.

14:00 - 15:30 hs. (Vibhavadee Ballroom B)

PLENARY SESSION I : (CONTINUED) - PAPER PRESENTATIONS

Chair : Lewis R.B. Elton, Head of Institute for Educational Development, University of Surrey, England.

"International Association for Community Development"

by Pierre Rozen, General Secretary, International Association for Community Development, Belgium.

"Open Higher Education : Mainstay of Universal Access"

by Pornchulee Achava-Amrung, Higher Education Department, Chulalongkorn University, Bangkok, Thailand.

"Lifelong Distance Education Program for Rural Development"

by Weerayudth Wichiarajote, Faculty of Education, Ramkhamhaeng University, Bangkok, Thailand.

- Refreshments

15:45 - 17:00 hs. (Vibhavadee Ballroom B)

PLENARY SESSION I : (CONTINUED) - PAPER PRESENTATIONS

"Distance Education : Concept, Philosophy and Approach"

by K.L. Kamal, Director, Institute of Correspondence Studies, University of Rajasthan, India.

"Open Higher Education : From Open Admission to Open-Minded Person"

by Paitoon Sinlarat, Director of Research Dissemination Project, Research Division, Higher Education Department, Chulalongkorn University, Bangkok, Thailand.

19:00 - 20:30 hs. (Vibhavadee Ballroom C)

Reception hosted by the Minister of University Affairs.

TUESDAY, 14 AUGUST 1984

9:00 - 10:30 hs. (Vibhavadee Ballroom B)

PLENARY SESSION II : DEVELOPMENT TRENDS IN INTERNATIONAL PERSPECTIVES

Chair : Patrick Guiton, Director of External Studies, Murdoch University, Australia.

Keynote Speech : Development Trends — An International Perspective

by Robert McCaig, Director, The Institute for Higher Education, the University of New England, Australia.

Commentators : Banphot Veerasai, Faculty of Political Science, Ramkhamhaeng University, Bangkok, Thailand.

: Kitti Charanyananda, Vice Rector for Student Affairs, Ramkhamhaeng University, Bangkok, Thailand.

- Refreshments

PLENARY SESSION II : (CONTINUED) - PAPER PRESENTATIONS

Chair : Robert McCaig, Director, the Institute for Higher Education, the University of New England, Australia.

"Development Trends in International Perspectives"

by Y.B. Mathur, University of Delhi, India.

"The Adaptability of the Radio and T.V. University to the Society"

by Tang Yi, Vice President, China Central Radio and T.V. Universities, Beijing, China.

"Strategies for Development of Curriculum, Personnel and Instructional Materials"

By Ali Bin Ahmad, Director, Centre for Off-Campus Studies, University Sains Malaysia, Penang, Malaysia.

- Refreshments

15:45 - 17:00 hs. (Vibhavadee Ballroom B)

PLENARY SESSION III : DICHOTOMY OF EQUITY AND QUALITY

Chair : Manjusree Pal, Head, Department of Pharmacy, Jadavpur University, India.

Keynote Speech : "Dichotomy of Equity and Quality in Open Higher Education"

by Udom Warotamasikkhadit, Faculty of Humanities, Ramkhamhaeng University, Bangkok, Thailand.

Commentator : John Minnis, Athabasca University, Canada.

PENARY SESSION III : (CONTINUED) - PAPER PRESENTATION

Chair : Udom Warotamasikkhadit, Faculty of Humanities, Ramkhamhaeng University, Bangkok, Thailand.

"Equity and Quality : Must There Be a Dichotomy?"

by Lewis R.B. Elton, Head, Institute for Educational Development, University of Surrey, England.

PLENARY SESSION III : (CONTINUED) - PAPER PRESENTATION

Chair : Robert McCaig, Director, the Institute for Higher Education, the University of New England, Australia.

"The Development of Experiential Learning Programs for Open University"

By Frederick Baker, Assistant Director, Office of Teacher Education, University of California, U.S.A.

"Distance Education in Canada : Towards a Typology of Learning Opportunities for Adults"

By John Minnis, Athabasca University, Canada.

"Computing in Open Higher Education : Some Lessons"

By Chris Sauer, School of Social and Industrial Administration, Griffith University, Australia.

14:00 - 15:30 hs. (Vibhavadee Ballroom B)

Wednesday, 15 August 1984

9:00 - 10:30 hs. (Vibhavadee Ballroom B)

PLENARY SESSION IV : GRADUATES' EMPLOYMENT

Chair : Nualsiri Paolohit, Faculty of Education, Ramkhamhaeng University, Bangkok, Thailand.

Keynote Speech : Open Higher Education and Graduates' Employment

by Michel Debeauvais, Professor, and Director of International Institute of Educational Planning, University of Paris VIII, Paris, France.

Commentators : Pat Noisaengsri, Vice Rector for Academic Affairs, Ramkhamhaeng University, Bangkok, Thailand.

: Thamnoon Sopharatana, Faculty of Economics, Ramkhamhaeng University, Bangkok, Thailand.

10:45 - 12:00 hs. (Vibhavadee Ballroom B)

PLENARY SESSION IV : (CONTINUED) - PAPER PRESENTATIONS

Chair : Michel Debeauvais, Professor, and Director of International Institute of Educational Planning, University of Paris VIII, Paris, France.

"The Graduates' Employment of Open Higher Education : the Case Study of Sukhothai Thammathirat, Thailand"

by Iam Chaya-Ngam, Vice Rector for Academic Affairs, Sukhothai Thammathirat Open University, Bangkok, Thailand.

"Higher Education and Graduate Employment in Developing Countries with Special Reference to India"

by Manjusree Pal, Head, Department of Pharmacy, Jadavpur University, Calcutta, India.

"Trends and Issues of Employment for Higher Education in Thailand"

by Thamnoon Sopharatana, Faculty of Economics, Ramkhamhaeng University, Bangkok, Thailand.

"Program and Curriculum Development in Open Higher Education"

by Kowit Vorapipatana, Director-General, Department of Nonformal Education, Bangkok, Thailand.

14:00 - 15:30 hs. (Vibhavadee Ballroom B)

PLENARY SESSION V : THE MANAGEMENT CHALLENGE

Chair : Tang Yi, Vice President, China Central Radio and T.V. Universities, Beijing, China.

Keynote Speech : Open Higher Education : The Management Challenge

by Lloyd McCleary, Professor, University of Utah, U.S.A.

Commentators : Frederick Baker, Assistant Director, Office of Teacher Education, University of California, Irvine, U.S.A.

: Khunying Chintana Yossundara, Faculty of Humanities, Ramkhamheng University, Bangkok, Thailand.

- Refreshments

15:45 - 17:00 hs. : PARALLEL SESSIONS

GROUP I : PAPER PRESENTATIONS

Chair : Lloyd McCleary, University of Utah, U.S.A.

"Australian/Malaysian Collaboration in Teaching University Mathematical and Physical Science at a Distance"

by Patrick Guiton, Director of External Studies, Murdoch University, Australia.

"Open Higher Vocational Education in New Zealand"

by Evan I. Jones, Deputy Principal, New Zealand Technical Correspondence Institute, New Zealand.

"Developing University Support for the Diverse Needs of Students in Open Colleges and Universities : U.S.A."

by Elaine Haglund, Educational Psychology and Administration, the California State Universities and Colleges, U.S.A.

GROUP II : PAPER PRESENTATIONS

Chair : Pierre Rozen, General Secretary, International Association for Community Development, Belgium.

"Education in Technical Subjects Through Open University"

By B.S. Jain, Associate Director of Mathematics, School of Correspondence Courses, University of Delhi, India.

"Current Status of Distance Education in Korea"

By Syngnan H. Kim, Research Professor and Acting Director, Institute of Distance Education, Korea Air and Correspondence University, Korea.

"How the PUC Continually Raises the Quality of Higher Correspondence Education"

By Zhou Jian-Shou, Ex-President and Current Advisor of Correspondence College of the People's Republic of China, China.

"Ramkhamhaeng University : The Management Challenge from Present to Future"

By Pat Noisaengsri, Vice Rector for Academic Affairs, Ramkhamhaeng University, Bangkok, Thailand.

THURSDAY, 16 AUGUST 1984

OPEN UNIVERSITY TOUR

- 08:00 hs. : Buses leave hotel for Ramkhamhaeng University.
- 09:00 - 12:00 hs. : Tour of Ramkhamhaeng University at Hua Mark.
- 12:00 - 13:00 hs. : Lunch at Ramkhamhaeng University at Hua Mark.
- 13:30 - 14:30 hs. : Tour of Ramkhamhaeng University at Bangna-Trad.
- 14:30 hs. : Buses leave for Sukhothai Thammathirat Open University at Pakkred.
- 19:30 hs. : (Vibhavadee Ballroom B)
Banquet hosted by Sukhum Nualskul, Rector, Ramkhamhaeng University.

FRIDAY, 17 AUGUST 1984

09:00 - 10:45 hs. (Vibhavadee Ballroom B)

PLENARY SESSION VI : SUMMARY AND CLOSING SESSIONS

Chair : Pat Noisaengsri, Vice Rector for Academic Affairs, Ramkhamhaeng University, Bangkok, Thailand.

- A rapporteur of each session presents a summary.
- General Discussion
- Refreshments

11:00 hs. (Vibhavadee Ballroom B)

CLOSING CEREMONY

Closing Remarks

By Muhammad Selim, Specialist in Higher Education, UNESCO, Bangkok, Thailand.

Closing Address

By Sukhum Nualskul, Rector, Ramkhamhaeng University, Bangkok, Thailand.

13:30 hs : BANGKOK TOUR (Optional)

(at your own expense.)

- Ancient City
- Grand Palace and the Emerald Buddha Temple
- The Crocodile Farm

LIST OF PARTICIPANTS

Names And Addresses Of OHE Participants

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- | | |
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| 2. Mr. Surapol | Viseskosin |
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| 4. Mr. Pat | Noisaengsri |
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The International Conference Committee acknowledges with thanks the generous support extended to the Conference by the following organisations and firms:

- The UNESCO, Bangkok
- The British Council, Bangkok
- The Ministry of University Affairs
- The Savings Bank of Thailand, Hua Mark Branch
- The Thai Military Bank, Hua Mark Branch
- The Thai International Airways
- Tourism Authority of Thailand
- The Hyatt Central Plaza Hotel
- The Chinnavuth Company, Ltd.
- Thanasit Co., Ltd.,
- P.C.-K.V. Corporation Co. Ltd.
- Mr. Pornthep Techapaiboon of Maekhong Company.
- Mrs. Mayuri Sukwiat, SEAMEO, Bangkok.

ICC also acknowledges the contribution of the Advisory Committee in the preparation of this Conference.

WELCOMING ADDRESS*

Ramkhamhaeng University strongly believes that one of the many important tasks as an open university is to create for scholars, and educators from all over the world an opportunity to discuss and exchange views on academic matters to improve the quality and effectiveness of teaching in terms of open higher education. It is considered that this goal can be best achieved only through close collaboration drawn from scholars, academics, educators and lay persons concerned with the improvement of higher education.

This conference, we believe, will become a symbol of collaboration among open universities throughout the world, and through this kind of conference, we will join hands to tackle the task of improving the quality and effectiveness of teaching, and bring about the enhancement of educational opportunity for youth and adults everywhere.

Ramkhamhaeng University deems it a great privilege to welcome distinguished participants from all over the world in assembling here. We hope all participants will have opportunities to contribute knowledge and experience to make this conference successful and effective. We are determined to attempt greater achievements in open higher education.

**Associate Professor Sukhum Nualskul, Rector, Ramkhamhaeng University Chairman of the Organising Committee*

AN INVITATION*

The Organising Committee has great pleasure in presenting the programme of the International Conference on Open Higher Education, scheduled to be held at Hyatt Central Plaza Hotel in Bangkok, Thailand, between 13-17 August 1984. This programme provides information on fees for registration and materials, conference information and services, a detailed conference programme, a conference calendar, general information, and also keynote speakers.

The conference emphasizes 5 themes concerning the open higher education, namely the Philosophy and Concept, Development Trends in International Perspective, Dichotomy of Equity and Quality, Graduates' Employment, and the Management Challenge. This conference will provide an opportunity to each participant to share views on open higher education at the international level, to review needs for its growth and to promote international cooperation in sharing efforts for further development of open higher education throughout the world.

The Organising Committee wishes to take this opportunity in extending to all concerned academics a cordial invitation to attend and participate in the 1984 International Conference on Open Higher Education.

*Dr. Pat Noisaengsri, Vice Rector for Academic Affairs, Secretary - General to the Conference

OPENING REPORT*

Your Excellency the Prime Minister, Distinguished Speakers, Conference Participants, Ladies and Gentlemen :

It is a great honour for Ramkhamhaeng University to serve as host to the International Conference on Open Higher Education. It is another further honour that Your Excellency has kindly come to preside over this opening.

Ramkhamhaeng University is an open University with a unique system of providing higher education by means of distance learning and classroom instruction. Students are able to select either means of learning, or both. With this concept, it is believed that this educational system corresponds with the nature of students who are mostly young, and that it truly is for the benefit of the students' life improvement. With its unique system of providing integrated means of education, Ramkhamhaeng University has a population of more than half a million students which makes it one of the leading open higher institutions in the world with the largest population. Hence, to propagate this concept in higher education and to explore other concepts with educationalists throughout the world, Ramkhamhaeng University decided to host this International Conference on "Open Higher Education."

The main issues that will be given careful consideration over the next few days are those of the concepts and practices, both in administrative modes and academic channels. The conference participants will have an opportunity to study, to discuss, and to exchange points of view concerning principles and concepts, development, administrative strategies, and the search for solutions to problems arising from the practice of open higher education.

It is earnestly hoped that this conference will elicit academic cooperation among nations that will yield direct benefit to Ramkhamhaeng University, and also to other universities throughout the world.

This conference will run for five days from today until the 17th of August. Participants are about 200 scholars and administrators from higher educational institutions abroad as well as institutions here in Thailand. The Conference has received financial support from the participants, from the Ministry of University Affairs' special budget for international conference, from the private business sectors, and from Ramkhamhaeng University.

About the keynote speakers : Ramkhamhaeng University has received full cooperation from several universities abroad and, from the beginning, wholehearted support from UNESCO here in Thailand. A number of interesting papers, submitted by scholars, foreign and Thai, will be shared in the sessions to follow.

We have now arrived at the appropriate moment. I would like to ask Your Excellency to do us the honour of conferring upon our five keynote speakers the University's Certificates of appreciation for their invaluable contributions to the Conference, and to deliver an opening address to mark this auspicious occasion.

*Associate Professor Sukhum Nualskul, Rector, Ramkhamhaeng University

คำกล่าวรายงานของอธิการบดี

รศ. สุชุม นวดสกุล อธิการบดี

กราบเรียน ฯพณฯ นายกรัฐมนตรี ที่เคารพ

นับเป็นเกียรติอย่างสูงแก่ มหาวิทยาลัยรามคำแหง ที่ได้มีโอกาสเป็นเจ้าภาพจัดประชุมนานาชาติ เรื่อง “อุดมศึกษาระบบเปิด” และ ฯพณฯ นายกรัฐมนตรีได้กรุณามาเป็นประธานในพิธีเปิดการประชุมครั้งนี้

มหาวิทยาลัยรามคำแหง เป็นมหาวิทยาลัยเปิดที่มีลักษณะเฉพาะที่ให้บริการการศึกษาทั้งโดยการใช้สื่อทางไกล และการบรรยายในชั้นเรียน ผู้เรียนจะเลือกเรียนโดยวิธีใดวิธีหนึ่ง หรือทั้งสองวิธีควบคู่กันไปก็ได้ โดยปรัชญาดังกล่าว เชื่อว่าวิธีการจัดการศึกษาลักษณะนี้ น่าจะสอดคล้องกับธรรมชาติของผู้เรียนซึ่งส่วนใหญ่เป็นคนวัยหนุ่มสาว และเป็นการศึกษาเพื่อพัฒนาชีวิตอย่างแท้จริง ด้วยวิธีการจัดการบริหารการสอนด้วยระบบประสมประสานโดยการใช้สื่อการสอนหลาย ๆ ประเภทนี้เอง ทำให้มหาวิทยาลัยรามคำแหงมีนักศึกษาถึง 700,000 คน นับว่าเป็นสถาบันอุดมศึกษาระบบเปิดชั้นนำแห่งหนึ่งในโลกที่มีนักศึกษามากที่สุด

ดังนั้น เพื่อเป็นการเผยแพร่ความคิดในด้านอุดมศึกษาดังกล่าว และเป็นการศึกษาแนวคิดอื่น ๆ จากนักการศึกษาทั่วโลก มหาวิทยาลัยรามคำแหงจึงได้จัดให้มีการประชุมนานาชาติเรื่อง “อุดมศึกษาระบบเปิด” โดยมีความมุ่งหมายสำคัญเพื่อพัฒนาการศึกษาระดับอุดมศึกษาในระบบเปิด โดยจะพิจารณาแนวคิด และแนวปฏิบัติทั้งในด้านการบริหาร และวิชาการ ผู้เข้าร่วมประชุมจะมีโอกาสศึกษา และแลกเปลี่ยนทัศนะเกี่ยวกับปรัชญา การพัฒนากระบวนการ กลวิธีการบริหาร และการแก้ปัญหาในการจัดการศึกษาระบบเปิด ผลการประชุมจะก่อให้เกิดความร่วมมือทางวิชาการ ระหว่างประเทศอย่างกว้างขวาง เป็นประโยชน์โดยตรงต่อมหาวิทยาลัยรามคำแหง และมหาวิทยาลัยอื่นทั่วโลก

การประชุมครั้งนี้กำหนด 5 วัน ตั้งแต่วันที่ 13 ถึง 17 สิงหาคม 2527 ผู้เข้าร่วมประชุมเป็นนักวิชาการ และนักบริหารจากสถาบันอุดมศึกษาระบบเปิดจากต่างประเทศ และเป็นนักวิชาการภายในประเทศรวมประมาณ 200 คน ในด้านงบประมาณ ได้รับการสนับสนุนจากผู้เข้าร่วมประชุม งบประมาณสนับสนุนในการจัดประชุมนานาชาติจากทบวงมหาวิทยาลัย เงินสนับสนุนจากบริษัท และธนาคารบางแห่ง และเงินรายได้ของมหาวิทยาลัย

สำหรับวิทยากรนั้น มหาวิทยาลัยได้รับความร่วมมืออย่างดีที่สุดจากมหาวิทยาลัยในต่างประเทศโดยความร่วมมือจากสำนักงานยูเนสโกในประเทศไทย และนอกจากนั้นยังมีนักวิชาการทั้งชาวไทยและชาวต่างประเทศเสนอขอทความเข้าร่วมในการประชุมอีกเป็นจำนวนมาก

บัดนี้ ถึงเวลาอันสมควรแล้ว ขอกราบเรียนเชิญ ฯพณฯ นายกรัฐมนตรีกรุณามอบเกียรติบัตรแก่วิทยากรผู้เสนอบทความหลักในการประชุมครั้งนี้ 5 ท่าน และต่อจากนั้นขอความกรุณาประกอบพิธีเปิดการประชุมนานาชาติ และกล่าวสุนทรพจน์เพื่อเป็นเกียรติแก่การประชุมครั้งนี้สืบไป.

OPENING ADDRESS*

Mr. Rector, Distinguished Speakers, Conference Participants, Ladies and Gentlemen:

It is my great honour to be invited to this Opening Ceremony of the International Conference of Open Higher Education.

For twelve years now, Ramkhamhaeng University has been responsible for providing open higher education for the people of this Kingdom. The unique system of open higher education at Ramkhamhaeng University differs from that found in other open universities in the world in that it employs distance education, and at the same time it also provides classroom instruction on campus and in regional centres. This has given learners an opportunity to choose the channel of education they deem most appropriate for themselves.

The open higher education system undertaken by Ramkhamhaeng University has achieved outstanding positive impact as can clearly be seen in the numbers of students enrolled—several hundreds of thousands—and in the widely-accepted quality of the university as reflected in its graduates.

Providing education is, in fact, a process of developing human efficiency. Hence, it is an important work that requires special attention and thoroughness. It has to accommodate the changing phases of the surrounding society. This conference, assembling distinguished international scholars, will therefore yield a great contribution to the development of the educational system of Ramkhamhaeng University and other universities throughout the world. This will be of demonstrable benefit to the efficient development of the human race.

As the Rector has just reported, this conference has received welcome cooperation and support from various institutions and individuals. I would like to thank those benefactors. Further, I wish to express my thanks to all the distinguished speakers, both foreign and Thai, who are to contribute to this conference. I welcome all the international academicians to this conference—... and to Thailand.

And now, I would like to declare open the International Conference, on Open Higher Education. May this conference proceed successfully and fruitfully as expected by all.

*H.E., Gen. Prem Tinsulanonda, Prime Minister of Thailand.

คำกล่าวเปิดการประชุมนานาชาติ ของ ฯพณฯ พลเอกเปรม ติณสูลานนท์ นายกรัฐมนตรี

อธิการบดีมหาวิทยาลัยรามคำแหง ท่านวิทยากร ท่านผู้เข้าร่วมประชุม และท่านผู้มี
เกียรติทุกท่าน

ข้าพเจ้ารู้สึกเป็นเกียรติอย่างสูง ที่ได้มีโอกาสมาเป็นประธานในพิธีเปิดการประชุมนานาชาติ
อันสำคัญครั้งนี้

มหาวิทยาลัยรามคำแหง ได้ดำเนินการจัดการศึกษาระบบเปิด มาเป็นเวลา 12 ปีแล้ว
การศึกษาระบบเปิดของมหาวิทยาลัยรามคำแหง มีลักษณะเฉพาะแตกต่างไปจากการศึกษาระบบ
เปิดของมหาวิทยาลัยอื่นทั่วโลก คือผสมผสานรูปแบบการจัดการศึกษาโดยใช้ทั้งสื่อการสอน
ทางไกลและการจัดบรรยายในชั้นเรียนควบคู่กันไป เป็นการให้โอกาสแก่ผู้เรียน ที่จะเลือกวิธีเรียน
ให้เหมาะสมกับตนเอง การจัดการศึกษาของมหาวิทยาลัยรามคำแหงโดยวิธีดังกล่าว ประสบ
ความสำเร็จราบรื่นตลอดมา จะเห็นได้จากมีผู้นิยมเข้าศึกษาจำนวนหลายแสนคน และผู้สำเร็จ
การศึกษาก็มีคุณภาพทางวิชาการเป็นที่ยอมรับโดยทั่วไป

การจัดการศึกษา คือ กระบวนการพัฒนาประสิทธิภาพของมนุษย์ จึงเป็นงานสำคัญยิ่ง
ที่ต้องจัดกระทำอย่างประณีต พิถีพิถันเป็นพิเศษ ทั้งยังต้องพัฒนาให้สอดคล้องกับสภาวะของ
สังคมที่เปลี่ยนแปลงไปตลอดเวลา การจัดประชุมนักวิชาการนานาชาติผู้มีความรู้ความเชี่ยวชาญ
ครั้งนี้ จึงมีความสำคัญยิ่งต่อการพัฒนาการศึกษาของมหาวิทยาลัยรามคำแหง และมหาวิทยาลัย
อื่น ๆ ทั่วโลก เป็นประโยชน์ต่อการพัฒนาประสิทธิภาพของมนุษยชาติอย่างแท้จริง

จากรายงานของอธิการบดีมหาวิทยาลัยรามคำแหง ได้ทราบว่า การจัดการประชุมครั้งนี้
ได้รับความร่วมมือร่วมใจ จากหน่วยงาน และบุคลากรหลายฝ่าย ข้าพเจ้าขอขอบคุณผู้ให้การ
สนับสนุนทุกท่าน ขอขอบคุณวิทยากรชาวต่างประเทศ และชาวไทย และขอต้อนรับนักวิชาการ
นานาชาติทุกท่านด้วยความยินดียิ่ง

โอกาสนี้ ข้าพเจ้าขอเปิดประชุมนานาชาติ และขออำนวยการให้การประชุมอันสำคัญยิ่ง
ครั้งนี้ ดำเนินไปด้วยความเรียบร้อย และประสบความสำเร็จตามที่ทุกท่านมุ่งหวังจงทุกประการ.

KEYNOTE ADDRESS*

The post-World War Two era is, among other things, the age of mass education. In the West before the war, the goal of most people was to get a high school diploma. But since 1945, the common goal has been to get a college education, instead. So it is not unusual in the West—and becoming increasingly commonplace in the Third World—to find parents with a high school education, or only a grade school education, who have sons and daughters with advanced university degrees; sons and daughters who have become doctors, lawyers, teachers. And this rapid increase in the number of those seeking higher education—what at times seems like a universal desire for higher education, on the part of young people and adults, too—is of course a major factor in the rise of the idea of the open university system.

The first major open university came into being just 15 years ago, with the establishment of the British Open University in England. And since that time, the open university system has quickly spread throughout the world.

College enrollments have now stabilized in the West, but this is not the case for countries in Asia and the Pacific, where enrollment figures are still expanding. Annual growth rate in the Asia-Pacific region has been 4.6 per cent annually, adding a total of 5.5 million students in the seven years between 1975 and 1982. This increase has been especially rapid in Thailand.

In 1970 approximately 2.5 people in a 1,000 were college students; but in 1982 almost 20 in a 1,000 were college students. This is an increase of almost 800 per cent in a 14-year period. The most important factor in this increase was Thailand's establishment of two open universities: Sukhothai Thammathirat, with 200,000 students now enrolled, and Ramkhamhaeng University, with half a million students a year registering for classes.

So whereas college enrollments have now stabilized in the West, they are still growing in the Asia-Pacific region. And this seems to suggest that the open university system is especially pertinent to this part of the world.

In addition to the remarkable increase in the number of those seeking university-level education, a second factor in the rise of the idea of the open university is the fact that this increase has brought with it a great diversity of educational needs, in terms of age, sex, occupation, socio-economic background, and geographical location.

Many older students are now seeking a university education, and usually while maintaining a full-time career job, not to mention a family. And there are many working adults seeking not a college degree, but specific courses to upgrade themselves on the job. A much higher percentage of women, especially in the Third World, now wants a university education. Another element in this diversity of educational needs is the student who does not score high on the college entrance examinations, but who wants a college education just as much as those do; and who is often as well qualified too, because examinations do not test motivation. Young people from lower socio-economic backgrounds, who must work while going to college, and sometimes drop out temporarily to work, is another segment of the population reached by the open university. Young men and women in remote rural areas,

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who for one reason or another must remain at home, also want the opportunity for a college education. This diversity of student needs cannot be addressed by the conventional university system.

In addition to the rapid increase in the number of those now seeking higher education and the diversity of their life-situations and educational needs, the third factor in the rise of the open university is an economic one. Open universities are, simply, much less expensive to establish and to operate than are conventional universities.

So the open university system, an especially democratic system, arose because it is able to provide educational opportunity for vast numbers of students, and in a comparatively economic manner. Also, its flexibility--in terms of admission policies, academic programs, learning time-tables, and so on--meets the great diversity of educational needs of the people in a way that the conventional university system cannot do.

But the open university system faces certain challenges. First and most obvious: can we be confident that open universities provide quality education? That is, is this "new idea" of an open university system a good idea?

We might begin to answer this question by noticing that the idea of an open university is not really such a new idea after all. Rather, it is a kind of formalizing institutionalization of things that have been around for a long time.

Take at-home study, for instance. As every American school child knows, the young Abe Lincoln spent his days splitting logs, and at night he earned a law degree by studying at home by the light of the fireplace. In rural America during the Depression of the 1930s, at home study was commonplace. And in general we can say that advanced education in rural areas has traditionally been a matter of at-home study.

Or take life-long learning. Marshall McLuhan the media expert tells us that the most important new post-World War Two technology to have an impact on the spread of mass education was the introduction of the inexpensive, mass-circulated paperback book. The mass circulation of the paperback was a giant step forward in what we now call "life-long learning" and "at-home study." In a sense, the paperback took the book out of the library, it took Homer and Ghandi and Freud (not to mention Harold Robbins) out of the library and put them, inexpensively, down at the corner drugstore. And in somewhat the same way, the open university, which McLuhan would probably call a new technology or medium, has taken education out of the classroom and put it, inexpensively and conveniently, in the home, not by Lincoln's fireplace, but also in front of the television set and near the radio and cassette tape player, not to mention the paperback book.

So the idea of an open university is in a sense a formalization of traditional and informal methods of getting a higher education. "Continuing education" and "life-long learning" not only describe a certain kind of student, but also a basic human drive.

But again, the most obvious challenge faced by the open university system is this: can we be assured that open universities offer the same quality of education as do conventional universities?

Teachers at open universities have the same educational qualifications as do those at conventional universities, and they grade their students according to the same strict standards; which implies that an open university education is comparable in quality to that offered by a conventional university.

Also, it seems reasonable to assume that the open university as system is, in the long run, just as good as the traditional university system. After all, a university does not really "provide education"; it provides the opportunity, it provides a system, for getting an education; which is finally, up to the student. The open and the conventional universities are

two different systems of education each with its strong and its weak points and it has yet to be proved which is better. Or perhaps I should say: it has yet to be proved that either is better. Again, it seems likely that they are different but equally valid systems of providing students with the opportunity of getting a quality education. It would be an interesting experiment to send some of our elite students through an open university a system wherein the stress is on learning rather than being taught to see if they might not get just as good an education, or even better, than they do at a conventional university.

A second major problem that must be addressed is linkage to the labor market. Open universities have meant a steep rise in the number of college graduates. And many of these graduates are not finding employment in their field of study. So it is not unusual in Thailand, and in the West too, to find young men and women with degrees in education, say, or political science or anthropology, waiting on tables in restaurants. But should the government be spending money to train young people in areas in which they will not find employment?

There are several possible ways of answering this question. First, many theorists say that a university education is not for the purpose of job training so much as it is to teach people to think, to solve problems. So, after some on-the-job experience, a graduate in political science if he or she has learned to identify and solve problems might make just as good a bank manager as would a graduate in economics.

Also, we might ask ourselves this question: which is better, unemployed young people without an education, or unemployed (or inappropriately employed) young people with an education? The hypothetical graduate in anthropology, which I mentioned a moment ago, waiting on tables in a restaurant, for now at least the labor market does change is probably not sorry to have a college degree. A college education develops people mentally and spiritually; and it gives them a sense of dignity and self-worth; things a cost-effectiveness sheet does not measure. The value a nation puts on education is an indication of what it thinks of itself. The value a government puts on education is an indication of what it thinks of its citizens.

So perhaps the real answer to this problem is not less education but more employment opportunities for college graduates. Also, open universities must broaden their range of offering to fields of study where employment opportunities are more abundant. For instance, next year Ramkhamhaeng will begin offering a degree in computer programming. This will not only mean more computer specialists, which the country will be needing more and more of, but fewer graduates in areas in which we already have an over-supply. But as in most Third World countries, our economy is growing; and so we will continue to need more skilled rather than unskilled labor; more education, not less.

Another problem in economics to be faced by the open university is the fact that such a low percentage of its entering freshmen graduate. On the face of it, this would seem to be a waste of money.

But it may not be entirely realistic to judge a university by counting the percentage of its graduates. For example, many adults take courses to upgrade themselves on the job, without the intention of graduating. Many students who drop out, return years later to finish their degrees, be it a two-year or a four-year degree. And should it be considered a waste of public money if a student does not get a degree? After all, if they spend a year or two in college, then they have got that much education. Again, the value a nation puts on education is an indication of what it thinks of itself.

So there are some question marks still hanging over the idea of an open university system. But when we consider the fact that the system is only 15 years old, this is neither surprising nor alarming.

And as we all know, addressing ourselves to some of these questions-identifying and solving our problems, if I may use that phrase again is the purpose of conferences such as this.

I wish you success.

PLENARY SESSION I :
Philosophy and Concept

Main Paper

OPEN HIGHER EDUCATION: PHILOSOPHY AND CONCEPT*

Introduction

All too often in educational discussions - and particularly at educational conferences—we plunge straight into the urgent issues facing us, unaware of or not interested in the fundamental presuppositions on which we base these discussions. The result is that we often unwittingly talk past each other, we fail - in E.M. Forster's immortal phrase — to connect. I see my task as one of clarifying these fundamental presuppositions, not so that we should necessarily agree on them, but so that, if we do not agree, we should know where we disagree. I shall attempt to do this and to illustrate the fundamental presuppositions through what I see as the urgent issues which face this conference. I do not expect that you will necessarily agree with me in my choice of issues.

The five words of the title

I begin by taking a good look at the five words - apart from 'and' - which constitute the title of my talk. I shall start from the end - "in the end is my beginning", as T.S. Eliot said.

1. *Concept*

A concept abstracts from reality, but it also forms reality. In a basic way it answers 'what' and 'how' questions, i.e. what is Open Higher Education and how does it operate? Also, of course, and of equal importance - what is **not** Open Higher Education?

2. *Philosophy*

This word has seven totally separate meanings, according to the Collins English Dictionary. The one which seems to me appropriate to the context here is "a system of beliefs, values or tenets." Put in another way, its purpose is to answer 'why' questions; i.e. why should Open Higher Education be what as a concept I shall say it is.

3. *Education*

No, I am not going to define 'education', and in particular I am not going to set up a dichotomy by contrasting it with 'training'. On the contrary, I maintain that education is an amalgam of polar opposites - it is **both** liberal and vocational, **both** formal and informal, **both** systematic and experiential, the latter including life experience. Its purpose is to realize the potential of each individual person or - more correctly - to enable each individual person to realize his or her own potential. The difference between these two statements of purpose is subtle but very real, particularly, as we shall see, in the context of open education.

4. *Higher*

Traditionally, higher education has been equated to university education and has been confined to a privileged minority. This is true, whether access to higher education is confined to those who can afford it or to those who merit it, for it is well established that any merit system favours the children of the wealthy. This elitist concept of higher education

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makes the latter closed to the majority; it is the very antithesis of 'open'. If therefore we are meaningfully to add the word 'open' in front of higher education, we must at the very least modify the traditional concept of higher education so as to remove those aspects from it which make it intrinsically closed. The most obvious modification concerns the age of the students in it; no longer will higher education be confined to the young, but it will be for those of all ages and so become part of what is called **education permanente** leading to **l'université du troisième âge**. The first two ages being childhood and working life, the third age is that of retirement, often longer than childhood and approaching the length of working life. The consequences for higher education of this age extension are profound, since it increasingly brings life experience into the educational process. More of that later.

5. *Open*

Lastly, the word 'open'. Most obviously, this ought to apply to access. But it is not enough to remove restrictive entry qualifications. It is also necessary to facilitate access for the less privileged; educationally through 'access courses' and economically through financial, work and study arrangements which make access feasible. This last point - appropriate study arrangements - is of course one of the most obvious features of open education and it has led to distance education being one of its most common features. However, 'open' should refer not only to access and what follows from the requirements of open access. It should refer also to the content of courses. A traditional university provides courses for its students; an open university should provide courses in co-operation with its students.

The 'Why' question

If I have characterized the word 'open' correctly, then open higher education constitutes a radical departure from the traditional which has to be justified. Let us look at this from two points of view.

The first of these is expressed in the title of a recent article of A.H.Halsey, 'Who owns the universities?!(1) Halsey argues that what he calls the ownership of universities has passed through four stages, as is indicated in table 1.

In each stage, the ownership has reflected also the main activity of the university, and as the former changed from priests to the aristocracy, the meritocracy and now the consumer, so the main activity has changed from the passing on of knowledge, to the passing on of culture, to the extending of knowledge and now to teaching and life-time learning.

The word 'now' is perhaps premature and, at least in most countries, should be replaced by 'in the foreseeable future', but in for instance Sweden and the United States ownership by the consumer, i.e. the student, is already reality.

My second point of view has been particularly well expressed by Professor Kamba, the Vice-Chancellor of the University of Zimbabwe.(2) In the keynote address to a recent training course for university teachers he said:

"For the universities, expansion has not been a matter merely of adding students to a system that remains basically unchanged: it has also meant change in the character and orientation of universities and their role in, and relationship to, society. Universities have become increasingly less detached from their social environment and have become more and more linked to the processes of change that affect society as a whole. The traditional concept of the disinterested pursuit of knowledge as the primary function of a university has become a luxury that the developing countries cannot afford. Even the more developed countries have come to recognise that such a concept is in substantial measure a luxury."

Thus while Halsey, speaking from a developed — perhaps an over-developed-country, stresses the interests of the individual member of society, Kamba — speaking from a less developed country — stresses the interests of society as a whole.

Having said this, I do not wish to suggest for one moment that the differences between the interests of the individual and society are in some way linked to the stage of development of a country; neither Halsey nor Kamba would accept this and nor would I. There is in fact inevitably always some conflict between the demands of the individual and the needs of society in all human organizations, and it is necessary to be aware of this conflict if we are to make decisions as to how to resolve it. The resolution of this conflict is a question of ethics and of values, in other words a question of philosophy in every sense of that word. Different societies will therefore resolve it in different ways and there is no one right way.

The 'How' and 'What' questions

In my analysis of the words 'open' and 'higher' I indicate that higher education would have to become more flexible and I spoke explicitly of co-operation. These two concepts, 'flexibility' and 'co-operation' are in fact the guiding principles for open education and they replace the concepts of 'rigidity' and 'competition' which characterize so much of traditional education.

How does this change affect practice? Lord Crowther, the first Chancellor of the British Open University, had this to say at the opening ceremony of that university:⁽³⁾

"One view regards the individual human mind as a vessel of varying capacity into which is to be poured as much as it will hold of the knowledge and experience by which human society lives and moves. We shall have plenty of tasks to perform (for them). But the (other view) regards the human mind as a fire that has to be set alight. That we also take as our ambition."

There is some flexibility here, but it is expressed in terms of two rigidly different types of students.

Kamba, in another part of the speech from which I have quoted before, recognizes the two views expressed by Crowther, but does not accept them:

"We can no longer afford to assume the mechanistic model in which man is depicted as a passive individual, a reactive animal, an empty vessel. The new situation calls us to assume the organismic model in which man is depicted as an active, developing and growing organism."

In a way, this is no less rigid since it implies that there is only one view, not two, but it is a useful corrective to the present situation in which all too frequently it is only the other view - that of the vessel to be filled - which is recognized in practice. Much of the internal criticism of the Open University has been concerned with this point, while many traditional universities have not even reached the stage of self-criticism which would enable them to recognize their own similar bias.

My own view is that different people at different times approximate more or less to these simplistic models. Even Kamba's model is paternalistic, and it under-stresses the students' contribution to the shaping of their own education. The word which for me characterizes open education is 'relevance', provided it is interpreted in its widest sense. This word is a creation of the student revolt of 1968, when students reminded those of us who taught them that students are people too. I have already discussed the balance between relevance to students and relevance to society; what I want to say here is that both should take precedence over relevance as seen by the teacher. The former demands flexibility, the latter leads to rigidity. Strangely - and I do not have time to expand on this point here - the same

shift from the teacher's point of view to that of student and society leads to a shift from competition to co-operation.

By now I doubt whether many of you will agree with all that I have said, but that is not my aim. What I hope to achieve in this talk is that if we do disagree we do so at a higher level than before. For this it is necessary in the first place to be provocative.

Open higher education for all

My talk so far has dealt with answers to the 'why', 'how' and 'what' questions, and the answers which I have indicated can form the basis of an open system of higher education. The rest of my talk will be concerned with two matters outside the system itself, but which strongly affect its viability and success.

The first of these is a consequence of the fact that an open system is the antithesis of an elitist, i.e. a closed system. Every experience of developing an open system in parallel with an existing closed system shows that this leads in fact to a half open system, inferior in every way to the competing closed system.

The simple and obvious reason for this is that a closed system is based on the principle of exclusion, while an open system is based on the principle of inclusion. Truly open higher education must therefore not only be available to all, but also be the only higher education available for any. It is therefore not only 'open education for all,' but also 'open education for all'. Let me illustrate this point with an example. If we wish to extend the opportunity of degree study to many more potential students, but cannot afford to do this through an extension of traditional higher education, then the common method to do this is through the provision of a cheaper system using distance education, in parallel with the existing traditional provision. Such a system is not open in the sense in which I have defined it. Instead we should provide just one open system for all, in which all students would spend a proportion of their time on campus and the rest off campus.

Equity and quality

At this point I am sure that some of you will wonder whether I have not gone too far. In expanding higher education in the way that I have indicated, do I not risk a serious reduction in the quality of what is being provided? Although this issue of equity and quality is a specific and separate topic of this conference, I feel that I must say something about it here. When Britain expanded its higher education system in the 1960s, the writer Kingsley Amis coined the slogan "more means worse". Let us analyze this provocative statement. At the time the British system was providing higher education for only a very small fraction of the age group and the extension allowed it to tap previously untapped groups of equal ability. Hence 'more' became simply more of the same, neither better nor worse, as is indicated in fig. 1 (a). Even if the extension goes beyond this and reaches groups of lesser ability, this should not affect the achievement of those of high ability, as is indicated in fig. 1 (b). The experience of the United States bears this out. It may be noted that the extension of the British system was comparatively small and took place almost entirely in a traditional way, the only exception being the Open University, which catered on the whole for a different and older type of student. Indeed, when the Open University opened its doors to a group of school leavers, the experiment was not a success. Hence we must conclude that if the whole of the expansion of higher education to reach really substantial numbers takes place through a parallel system which uses distance teaching, then more will indeed have meant worse, as is indicated in fig. 1 (c). If on the other hand, the whole of the system goes over to a unified open system, then the result might be as shown in fig 1 (d).

If we now compare before and after in fig 1 (d), we can no longer come to a simple conclusion. We shall have to decide what is better for a particular society - to educate a small elite to a very high level or a much larger group to a level which may be marginally lower. I am in no doubt that the latter is better for a developed country and I hypothesize that even for a developing country the social divisiveness of an elitist system is too high a price to pay for limited excellence.

Obstacles to change

The second matter outside the system itself which I wish to discuss concerns the obstacles in the way of achieving the kind of change which I have advocated. There is the obvious vested interest of the elite which will see its privileges threatened. This is a political matter which it is not for me to pursue. There is also the strong conservatism of academics. All professions are conservative in their practice, and this is particularly so when a profession is untrained, as is the case with academics, so that current practice can build only on past practice and the practitioner is largely ignorant of alternative practices. To change this it is necessary to provide a training programme which, incidentally, would provide an opportunity to also improve traditional higher education. I have described such a training programme elsewhere.⁽⁴⁾

There is one other major obstacle which is less appreciated in general than the two mentioned above. This is concerned with the policies of governments and funding agencies. Too often governments demand quick and visible results, and it is here that there may be a dangerous demand for a quick remedy. It can in particular lead to the buying-in or taking over of a distance teaching system which has already been developed elsewhere. There is now sufficient experience to show that it is virtually impossible to transfer educational systems from one country to another without serious loss and a high risk of failure. The same is true of the uncritical acceptance of methods that have been found highly successful elsewhere. Unfortunately, the critical evaluation of alien systems and their adaptation to new use is an operation which takes more time than Governments are often prepared to allow.

Even if this error is avoided, there remains the danger that lies in the demand for visibility. Something spectacular must be shown to have been done and often this means a stress on the most recent technical development, whether it is broadcast television (now out-of-date), satellites, computer assisted learning or a video data system. They all have their appropriate use, yet all over the world the most successful medium for distance education continues to be the printed page. Funding agencies are liable to succumb to the same temptations as Governments. In addition, their financial rules and procedures have often been developed in conjunction with traditional education and are ill-suited to distance education. Thus I have found that an agency which was prepared to pay considerable sums to support students from a developing country to attend courses in a developed country — travel, maintenance and large fees — was unable to provide the very moderate fees for students on a distance learning course provided by that developed country, just because the students did not leave their own country.

Conclusion

Let me conclude. I have tried to outline my philosophy and my concept of open higher education and I have drawn certain conclusions. I am far from optimistic that what I would like to happen, will happen, and many of you may in any case disagree with me sufficiently so as to hope that it will not. What I hope is that what I have said will have stimulated debate for the rest of this conference and that you will not reject it out of hand. If I have achieved that, I am content. Finally, I want to say that nothing that I have said should

be taken as a criticism of Ramkhamhaeng University which - through circumstances outside its control - is following the model described in fig 1 (c). *Its outstanding work has been recognized quite recently in a rightly appreciative article in the Times Higher Education Supplement*⁽⁵⁾. However, the fact that it is hosting this conference is to me sufficient evidence that it is open - the word is most apposite in the circumstances - to new and even revolutionary ideas.

References

1. A.H. Halsey, "Who owns the universities?" *New Society*, 3.5.1984.
2. W.J. Kamba, Keynote Address to the Training Course Workshop on "Improving University Teaching and Learning; Roma, Lesotho, July 1983.
3. Quoted by D. Harris and J. Holmes, "Open to Martha, closed to Mary", *Times Educational Supplement*, 14.2.1975.
4. Lewis Elton, "A didactic training for teachers in higher education?" *Z.für Hochschuldidaktik*, 5 (1981), 17 - 26.
5. Ben Barber, "Teaching a cast of thousands", *Times Higher Education Supplement*, 22.6.1984.

TABLE 1

Centuries	Who owns the universities?	Major activity
12 - 16	"Owner"	passing on knowledge
17 - 18	priests	passing on culture
19 - 20	aristocracy	extending knowledge
21	meritocracy	life-time learning
	consumer	

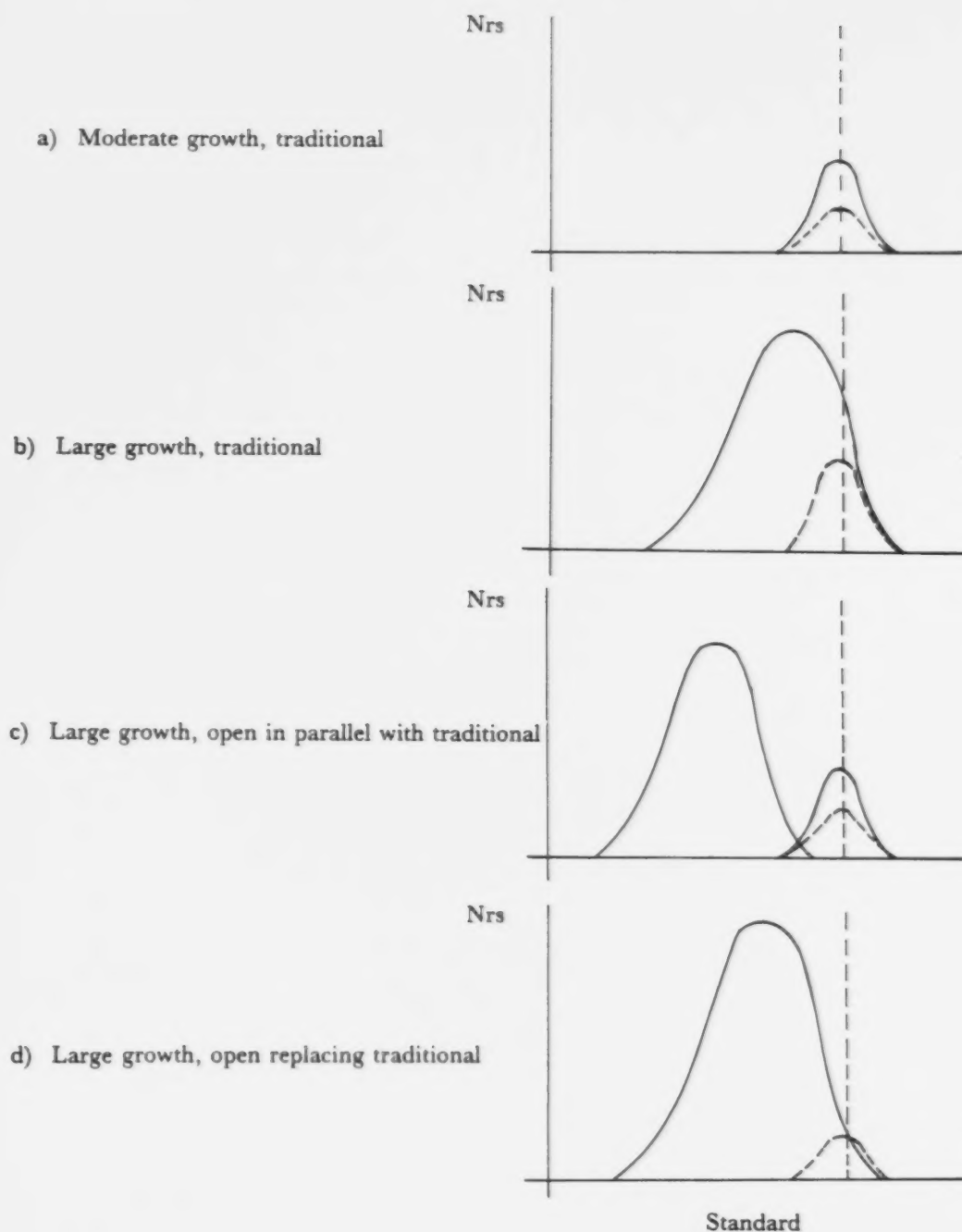


Fig. 1

Growth in student numbers in higher education under different conditions (--- before, ---after) and standard reached.

LRBE/VF

25 June 1984

Dr. Thong-in's comments :

I should say that I agree with Prof. Elton and should stop making comments. I would make comments on three aspects.

1. The question of the definition
2. The question of the 'why'.
3. Issues

and discuss particularly from or with the reference to the experience from the open university especially Sukhothai Thammatirat. I think both of us are qualified to make the comments because we are the practitioners of open higher education both Sukhothai and Ramkhamhaeng. And in Thailand we are brothers. R.U. is a big brother. According to the Rector's report this morning, R.U. has 700,000 students. STOU is a small brother because we have 300,000 students. I am happy today because Dr. Pat allowed me the small brother to speak first.

The first one has come to the question of definition. Prof. Elton mentioned 3 characteristics of open education.

1. **Open access means open to all:** we don't disagree with that because we have practised both of us R.U. and STOU. Everybody can study with us even if he is in prison or in jail.

2. **Open study arrangement.** Prof. Elton said it was an open method. I would say it is the most important one. At STOU we talked about distance education. We emphasized on that. And I think open method is the most important. That is student can study at home without attending class.

3. **Open- content.** He said it is the cooperation with the student. We normally assume that open education is doing a good job in terms of providing education of social sciences. But if we take the concept of open-content, that means that we can provide education not only in social sciences but also in technical areas, in science and in technical engineering, if you would like to do. I think these three characteristics are important for open higher education.

I would like to add more from my experience, when talking about **open cooperation** It seems to be one of the most important characteristics of open education too because by having open education you have to open cooperation. In the case of our open university, we learn to cooperate with the Department of Secretary of Education, with the high school, with the public library and regional universities to provide open higher education. Without this we cannot survive.

The second one is **open evaluation.** That does not mean that it is done with people within the university but it is also done with the people outside the university, for example, with the tutor. The tutor has the role to make evaluation. The course team writers, the course writers have the role in writing examination. I would say that this is one of the important characteristics of open higher education.

Dr. Uthai's comments:

As a big brother I speak softly and I have nothing to say more because our young brother has spoken all but I should say, In fact, I agree with Dr. Elton in many points starting from the concept philosophy of open higher education to me. It is kind of very insightful thought about what's going on in the field of open high education. At first he tries to illustrate to us that the concept of open higher education has to be changed according to the society needs and also at the same time individual needs for students. What is confusing now is what definition would you prefer or what definition would you like to use in terms of laying ground work for practices and operation of the system because now we have the open admission, we have opened all policies.

Prof. Elton's definition about open education seems to enlarge what has been done in the past for a small group of people, the elites. This group of people take all advantages of what should be received in society and expanding to the practical idea that not just only a small group of people who should benefit from that privilege and so that he tried to expand that opportunity in higher education to all people who are qualified to be accessed in that education. The problem in our society is not because we have only limited number of intellectual persons. We have a lot of intellectual persons, but because of chance, they do not have chance to be in access of education for the most privileged ones.

I am happy that Dr. Elton has tried to enlarge our horizon in terms of open education that we have to be opened first. If we are not really opened, how should we open?

I would like to point out that the open education in this new respective perspective has something to do with the **flexibility** and **cooperation**. I would like to put more stress on these two big words because flexibility can lend itself to many practices that need to be done for the benefit of not just only students but society as a whole. At the same time the flexibility would not be accomplished unless we have cooperation among those who are involved or who are concerned with higher education administration. That is why flexibility here could lend itself to open access to education not just only on campus but also off campus. I admire Dr. Elton that he tried to compromise the concept. I mean the belief that even in Britain or in England itself has tried to put education for limited number of people in terms of the whole population who need to have open higher education in that it has two dual aspects. Here's the question of **access** and **outreach**. The population that Dr. Elton pointed out is that we should have what we call unified open higher education. That means that we should give an access to everybody who are capable of having education. At the same time, we could outreach to those who could not get the benefit of being on campus, but this also leads to the issue of how we practice in these two ways. So my problem is that relevancy of opening higher education should be considered for three parties; students first, society and teachers. But what Dr. Elton has suggested is that the student and society should precede professors and teachers; that might be a problem of implementing this idea that how could we as teachers or professors in the institution, program or do our own work without having our own technique and method appropriate for ourselves. If we just listen to students or to the society in some ways, how should we proceed to the end of education that we should have defined? So that's why open education, although we include students and societies at the same time, has to include all teachers who have to do the job.

Dr. Elton has pointed that teachers or professors in traditional universities have restrictions or have something to do with the change; they would not agree with the new ideas of open education. In that case, the best way to solve this problem is to get them get what definition they would like to use. If they still use the old, their own traditional definition, it's very difficult to change the attitude to follow new ideas of open education.

My second point that I would like to point out is the issue of training supports of both government and private sectors. This is another issue in terms of open education nowadays. Take for example, the case of Ramkhamhaeng University. Although the structure of the University has a dual program; That is on and off campus programs. But in order to proceed with the project to be done, we need support not just only from the government but also from the community or societies as well. If we operate the University just by our own pockets or the money from the student fees, that might not be appropriate or enough for implementing all the projects to serve all the community of the people using the services of the University. In that case what I would like to suggest is that the cooperation and collaboration among the people involved. We should seek for that kind of cooperation.

The last point I would like to mention is that in order to have unified open education program, we should a cooperation among institutions, among the government sectors and among societies. This means that we should not select to do what we want to do. We should look at the whole problem and share it with each other, and share expertise: what should be done?; who should do certain jobs?. Not right now we are trying to open all kinds of courses. Some kind of duplicating and some kind not necessary for certain institutions to do. This means that each institution should think about their population: not just for those who are selected. They should think about the society that they belong to. I propose that institutions of higher education should not have only one program on campus. They should include any program off campus, so that each institution of higher education in the nation will take responsibility for operating higher education in the whole system. If can't do that we will come to in issue of institutional differences in terms of budgets, in terms of expertise, in terms of projects and plans. If we did not cooperate with each other, it would result in doing lot of duplication, waste of time and money. In this case we have to apply Dr. Elton's proposal; that is, the unified open education should be implemented for all people who are qualified to use that access. At the same time it should be open to all methods and techniques that are necessary for implementing our program. In that case we can accomplish the task that as an institution we have a commitment for the society to do our job. I would like to add one thing to Dr. Elton's proposal that in the context of developing countries such as South East Asia or in Thailand, for example, we have what you call financial tight budgets and at the same time we are so backward in technology and how to use emerging technology to help teaching or running the program. In that case developed countries also should look to us and lend us a helping hand, either in financial or expertise. In that case we can truly open our doors for our people who need higher education. I think that if we try to apply these ideas and concepts that Dr. Elton has proposed, there might be some discussion to follow. I believe that if we have open mind. We have open access to students. We could outreach them and we could open to all techniques and methods for the context of our own. This means that we will accomplish the task. Thank you.

A comment from a Philippine participant :

You have mentioned the different kinds of open higher education. But in the context of developing countries in which there is a lot of poverty, where most of the people belong to the lower class. It is in this area where many of our universities are not opened. In two cases, we are not open, because of financial inability of this lower class people. In the second place, this lower class people could not gain access to the university because of cultural deprivation. This is a real problem in the Philippines; we have an open university for 86 years but our college graduates up to now are only 2% of the population. 71% of our people are poor and this 71% can not gain access to our universities. So there must be a program which can be open to this lower class people. In the Philippines, people are trying to do something about this. Because we are a state university and we are subsidised. We try to use our money to let the lower class gain access to the university. This means that we have various programs. And now we enable the lower class to enter our universities. Also, we try to solve their needs. We subsidise the poor.

A comment and question from an Australian participant:

I just like to make a comment on Prof. Elton's reference to the development of what you refer to as mix mode education in Australia. Some Australian universities, you mentioned my university, Murdoch University. You mentioned Daikin. I think he might also possibly mention Griffith University, which is another one with a similar development. Mixmode Principle, which he referred to, I think in my university, it is based on the principle that the student best know the circumstances, dictating a way they should study at any particular time. And these circumstances often change. So the move between on campus and off campus study is something that the student has best place to determine rather than the institution. In this case I think it has an element of openness about it. On the other hand, I think just to put things in context, I felt I should point out that the Australian university context is not broadly an open access one of the sort which will be introduced here. And although most universities in Australia do have some provision for articulated admissions, it is a very much a largely selective admission system. The acceptance of Mixmode principle of Murdoch University is based very largely in my experience on the confidence of academics in the university : both conventional and less conventional academics that they are in control of both modes of teaching by which I mean not writing courses, but also tutoring directly. This is the way to control the quality both the on campus and off campus modes.

My question to Prof. Elton is whether he, from his past experience of academic staff in countries throughout the world would see the development of Mix Mode principle to which some of our universities in Australia as here as accidentally something which is necessarily restricted to small scale operations.

A question from an Indian participant:

How can we decide on the social relevance?

Prof. Elton's response to the four commentators:

1. To the Australian question:

-Of one year on campus and two or three off-campus would not simply cope with it under the present situation. I know that it is certainly true that at present it is mixed up at a small scale as long as they are not recognized as the main form of provision. I want to accept that this ought to be the main form of provision. Perhaps growth in number will be somewhat slower. But this will be accompanied by a reduction in the present abhorrent drop-out rate in many open systems. I would like to say here that when I drew my curf on standards, I included the drop-outs in the curf and they of course bring down the average standard. It is not the standard of those who successfully complete which is lower in an open system. But it is the fact that just a small proportion of student population actually finishes and it is that which would be rapidly reduced by mixed system and we've got to start somewhere. I am nearly suggesting that it is another way of expanding. It has its disadvantages. It will not be possible to take half a million of students immediately into the system. This is of course related to the question from Malaysia.

2. Why are there such strong objectives to open systems?

Academics are naturally conservative. It is their business to be conservative to transmit knowledge. And it is only through training I believe that these conservativists can be reduced. But I would stress that the fact that academic career is rarely either only in an open system or in a closed system. That makes it difficult for an open system to develop. And that is another argument for establishing a unified mixed system that will unify academic careers and reduce conservatism.

3. How can one decide on what is socially relevant?

The question from India which I really feel it is outside my province. I did say that each country will have to decide its own values and its own ethics when it comes to decide what is relevant. And that is not confined only to developing countries. I would like to say that I come from a country where at present there are very considerable arguments as to whether the present government's idea of what is relevant to the community is what ought to be relevant to the community. But as I say it is not the problem for the citizens.

4. The response to Dr. Thong-in's and Dr. Uthai's comments :

Let me turn to my two commentators and I was just little disconcerted that they agreed with me to such an extent. But I know that I am in a country where people are known for their politeness and I hope that they will to some extent during this conference, all will be aware that progress often does depend on friendly disagreement to reach in turn agreement. However, I would like to say that I was impressed by some of the additions that were made by Dr. Thong-in. I was pleased when he added open-cooperation and open-evaluation as another aspects of openness. And Dr. Uthai when he referred to the neccessity for developing teaching and learning methods for on and off campus teaching. This is not actually the part of the theme of conference. The actual teaching and learning that was going on in an open systems. Perhaps Dr. Uthai has started us off the next conference which should be more on teaching and learning.

As for financially tight budget which I may again refer to my own country. This is not something that is confined to developing countries. But I would agree that it is of necessity that developing countries have financially tight budget but that to some extent of choice that developed countries have tight budget and that, however, we in the developed

countries. And am not quite sure whether Britain is now classified really as a developed country or one which is over developed to the point which is over to the top can learn much from the recent developments in developing countries this time which were established much more as two-way traffic not financial but ideas.

So in conclusion, let me just refer to points which Dr. Thong-in made where perhaps there was slight misunderstanding or possibly even disagreement. As regards open-content, I do believe that even in the teaching of the subject like engineering, once we take in students into our system who have life experience in the engineering industry that their contribution to the teaching and learning that goes on in a university can be of considerable value. And the development of teaching and learning methods such as project methods and so on which makes it possible which I believe much to be encouraged.

Supporting Paper I

INTERNATIONAL ASSOCIATION FOR COMMUNITY DEVELOPMENT *

1. Concept of continuing education

Everybody recognizes that we have entered the era of continuing education but divergences still exist in the meaning of the expression. We thus have to make up a list of the different senses. We can draw three main aspects from continuing education :

- instrumental cultural aspect
 - * refresher course
 - * in-service training
 - * re-orientation
- partial cultural aspect
 - to provide all social categories with the means
 - to express their conceptions of the world
- global cultural aspect
 - to understand the world we are living in.

2. Some current implementations in the field of continuing education at university level in industrialised countries

- British Open University
- American system of co-operative studies
- Canada's co-operative studies
- Belgian implementations
 - * ISCO : Institut Supérieur de Culture Ouvrière (Higher Institute for Workers' Culture)
 - * FOPES : Faculté Ouverte de Politique Economique et Sociale (Open Faculty of Economic and Social Policy)
 - * FAR : Fondation André Renard (André Renard Foundation)
 - * CUNIC : Centre Interuniversitaire de Charleroi (Charleroi University Centre)
- Third Age Universities.

3. Opinion of adults participating in a process of continuing education: results of a survey held by the Institut Universitaire de Formation Permanente (University Institute of Continuing Education).

4. Conclusions : conditions for Open University to make an efficient contribution to continuing education.

* Dr. Pierre Rozen,

General Secretary, International Association for Community Development, Marcinella, Belgium

Supporting Paper II

OPEN HIGHER EDUCATION: THE MAINSTAY OF UNIVERSAL ACCESS*

"For it is not the possessions but the desires of mankind which require to be equalized, and this is impossible, unless a sufficient education is provided by the state."

Aristotle, *Politics II*, 7.

The discussion of open higher education as the mainstay of universal access must be preceded by definitions of the two key concepts: open higher education and universal access.

Open Higher Education

Open higher education is fundamentally a new kind of educational system. It has accepted part-time mature students of desperate backgrounds and abilities, who wish to study for degrees in their own limited conditions - be it at homes far away from campus or via occasional visits to campus or tutoring stations and other media. Its teaching resources utilise a variety of media, including correspondence materials, television programs and radio broadcasts. (McIntosh, 1975).

The concept of open higher education evolved from the convergence of three major postwar educational trends. The first of these concerns developments in the provision for adult education, the second the growth of educational instruction system technologies, and the third the political objective of promoting the spread of egalitarianism in education. (Perry, 1977).

At present various types of open higher education are operating in full force all over the world. As categorized by McKenzie, et al. (1970), there are four main groups as follows.

1 Major well-developed systems.

- The Open University of the United Kingdom.
- Open Learning in Japan.
- The External Degree in Australia.
- Correspondence education at post-secondary level in the Soviet Union.
- University courses to degree level for part-time adult students in France.

2 Focus on enlargement and improvement of teaching forces.

- The UNWRA/UNESCO Institute of Education, Beirut.
- The Radio College (Rundjunk) in the Federal Republic of Germany.
- The Correspondence Course Unit in the University of Nairobi, Kenya.
- External Courses for teachers in the remote rural areas of Newfoundland (Canada) by the Memorial University of St. John's

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Editor-in-chief, Thai Version of the *Children's Encyclopedia Britannica*

3 Learning-Contract Institutions

- The Empire State College, New York.
- The Minnesota Metropolitan State College.
- The Community College of Vermont.

4 Recent development within the past decade.

- Ramkhamhaeng University, Thailand.
- The State University of Nebraska.
- The Everyman's University, Israel.
- The Free University of Iran.
- Satellites for Education.
- Sukothaithammatirat, Thailand.

Perusal of each open higher education institution lay bare uniqueness, however, essential characteristics of open learning systems are the same core of these operations.

The system must guide a student by eliciting, interpreting and analyzing goals at the beginning point and throughout the student's contact with the program of instructions.

The system must guide a student by eliciting, interpreting and analyzing goals at the basis for making decisions, instructional design including evaluation, and in such a way that they will be fully known to, accepted by and capable of modification by students.

The system must facilitate the participation of learners without imposing traditional academic entry requirements, without the pursuit of an academic degree or other certification as the exclusive reward.

To provide the flexibility required to satisfy a variety of individual needs, the system should make it operationally possible to employ sound television, film and print as options for mediating learning experiences.

The system should use testing and evaluation principally to diagnose and analyse the extent to which specified learning objectives have been accomplished. In other words, the system should be competency-based.

The system must be able to accommodate distance between the instructional staff resources and the learners, employing the distance as positive element in the development of independence in learning, (MacKenzie, et al, 1975).

Universal Access

To seek increased access is, of course, not a recent objective among educators. Universal access or rights of those graduated from secondary schools to be granted equal opportunities in pursuing their education in the tertiary level is commonly projected in all nations as the summit of the nation's educational efforts.

I do not believe that every young person should attend an institution of higher learning. However, I do favor universal access for those who want to enter institutions of higher education, are able to make reasonable progress after enrollment, and can benefit from such enrollment. The provision of universal access is important to democratic world. The movement started in the 1800's when the Open University of London was founded and is later emulated in the U.S. and elsewhere, when higher education replaced the Western frontier as the land of opportunities for American youth, especially, minorities in the demands for "open admissions", (Brubacher, 1978).

In sum, the concept of universal access as the mainstay of open higher education defies privilege of elites and meritocracy in favor of right of all and egalitarianism.

The Mainstay

Highly educated citizens are the prerequisite of a successful state. Higher education, with the missions of **teaching**—transmitting the knowledge; **research**—discovering new knowledge and **service**—applications of such body of knowledge for the society, are not mainly vocational and professionally oriented, wherein students are trained to fit certain jobs. At this age and time it is almost impossible to do so, because the world is changing quite rapidly with the fast moving technological revolution. Consequently, the best a college or a university might be expected to do for their students is to merely provide them with well-rounded general education programs so as to be flexible, innovative and adaptive to whatever vocations they might find themselves after graduation.

Universal access made possible by open higher education does not guarantee jobs but provide equal opportunity for tertiary education to those who wish to pursue such higher learning. College education has greatest impacts in instilling awareness of "civic responsibilities" in their graduates, which in turn become elites at all sectors in their respective communities and thus, contribute to the overall betterment of the society.

Since such "general education" or the core curriculum of every college offering lies mainly in the cognitive domain as categorized by Bloom, the disadvantages of the open higher educational systems limit potentialities of transmitting knowledge in the affective and psychomotor domains. Such drawbacks are due to superficial contacts students may have with the faculty or the campus. Fortunately, however, the potentialities of open higher education in educating citizenry within the cognitive domain is limitless.

As most students enrolled in open higher education systems are non-traditional and more mature, pursuing their studies on a part-time basis while holding a job, open universities are hence exempted from the derogatory label of "Ivory Tower", (Hutchins, 1972). Students working and touching the "soil of experience" are better equipped to put theories into practice and come up to par with the rapid pace of new technological developments. Promisingly, open higher education system might eliminate the skepticism posed by a famous futurist, Alvin Toffler when he wrote the following.

"It is now clear that the recent upheavals in higher education are part of the larger revolution that is transforming the advanced technological nations from industrial to superindustrial powers. This vast historic transition is moving very rapidly, based on the new technologies and on cultural and social innovations. Yet higher education is neither changing rapidly enough to keep pace nor producing students capable of moderating and shaping the forces of change." (Toffler, 1974).

Another important mission of open higher education is the role of vehicles leading to ideal essence of higher learning as emphasized by the Carnegie Commission on Higher Education in their critical report, **Less Time, More Options** which is in accordance with recommendations offered by the Commission on Non-Traditional Study's report, **Diversity by Design**. The principal goals underscored and might be reached via universal access made possible by open higher education systems are summarized as follows.

The State of the Art.

- Many more young people attend college.
- Much more of education takes place before college, outside college, and after college than ever before.
- Jobs have changed.
- Young people have changed.

Respective Recommendations.

- To shorten the length of time in formal education
- To provide more options
- To make educational opportunities more appropriate to lifetime interests
- To make certain degrees more appropriate to positions to which they lead
- To make educational opportunities more available to more people and "Open Universities" well-established universally by the year 2000, (Carnegie Commission on Higher Education, 1974).

In conclusion, philosophically, open higher education is confirmed as the mainstay of universal access - a means to materialize egalitarianism which may enable highly educated citizenry equipped with "civic responsibilities". Although such systems lack maximum transmission of knowledge in psychomotor and affective domains, advanced knowledge in cognitive domain - general education - already serves the purpose of adaptive abilities of graduates in a rapidly changing world revolving in the midst of "technological revolution".

Notwithstanding the non-traditional nature of open higher education, it does not necessarily trade-off or preclude excellence, as Gould elaborates :

Education to match our needs - as individuals and as a society - this is everyone's goal. We should work toward it enthusiastically, with a sense of commitment and with confidence that there are good and valid ways to achieve it, ways that do not lessen quality even when they are different from traditional standards. Many pathways lead to excellence just as to the kingdom of heaven, and neither the traditionalist nor the non-traditionalist has a monopoly on them. All the resources for learning, wherever they may be found and used, can be helpful in the task; all people of goodwill and probity, in education or elsewhere, can be partners in an enterprise to a democratic nation, (Commission on Non-Traditional Study, 1973).

References

- Brubacher, John S. **On the philosophy of higher education**. San Francisco : Jossey-Bass, 1978.
- Bruner, Jerome S. **Relevance of education**. Middlesex : Penguin, 1974.
- Carnegie Commission on Higher Education. **A digest of reports with an index to recommendations and suggested assignments of responsibility for action**. New York : McGraw-Hill, 1974.
- Commission on Non-Traditional Study. **Diversity by design**. San Francisco : Jossey-Bass, 1973.
- Hutchins, Robert M. **The higher learning in America**. New Haven : Yale University Press, 1972.
- Kerr, Clark. **The uses of the university**. Boston : The Harvard University Press, 1972.
- MacKenzie, N. et al. **Open Learning**. The UNESCO Press, 1975.
- McIntosh, N.E. et al. **A degree of difference : the open university of the United Kingdom**. New York : Praeger, 1977.
- Perry, Walter. **The open university**. San Francisco : Jossey-Bass, 1977.
- Toffler, Alvin. **Learning for tomorrow : the role of the future in education** New York : Random, 1974.
- Tunstall, Jeremy (Ed.). **The open university opens**. Amhearst : University of Massachusetts Press, 1974.

SECTION I

A PHILOSOPHICAL CONCEPTUAL SYSTEM OF LIFELONG OPEN HIGHER EDUCATION FOR NATIONAL DEVELOPMENT : A PEACEFUL APPROACH

1. A Philosophical Perspective on Education and Development

Education at all levels, including higher education is the most important instrument for development. More and more countries of the world place education at the top priority for national development.

Why does education have assumed such an important role in national development?

The answer probably lies in the fact that education is the major process of human resource development which, in turns, serves as creative forces for the transformation of social institutions and natural resources.

But the crucial problem is, education and national development in many countries usually go in different directions and aim at different goals. The problem becomes even worse when these goals are at variance with the laws of nature.

For instance, development goals of various countries aim at promotion of material - technological well - beings at the expense of social harmony and peaceful life. This kind of goals constitutes unbalanced development, hence are dissonant with the law "Balance of Nature". When development runs counter to the Balance of Nature, several social-psychological problems entail, and often culminating in disharmony, conflicts and wars at individual, group and societal levels. The present world situations are self-evident of this unbalanced development.

At the individual level, more and more people suffer from poor mental health and neurosis due to the over concern for material success at the expense of spiritual-psychological development.

At the inter-personal level, the human relationship tends to be economic and selfish due to the over concern for their material well-being at the expense of the humanistic relationship base on loving kindness and compassion for other human beings.

At the group level, the inter-group and inter-ethnic conflicts and disharmony still persist as major social issues in many parts of the world, due to the pursuit of group interests without social responsibility.

At the societal level, social problems are on the increase due to moral degradation.

At the time of this writing, many sporadic wars are raging on in different parts of the world. These wars are more or less the consequences of national and international unbalanced development. These wars may lead to World War III which can eventually destroy the whole world.

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Viewed from the world perspective, the world at large has been developing in a very unbalanced manner. If we designate three curves, namely, the Curve of Human Nature, the Curve of Social Institution and the Curve of Technology as underlying the evolution of civilization, the present world development would look like the graphic illustration in Figure 1.....

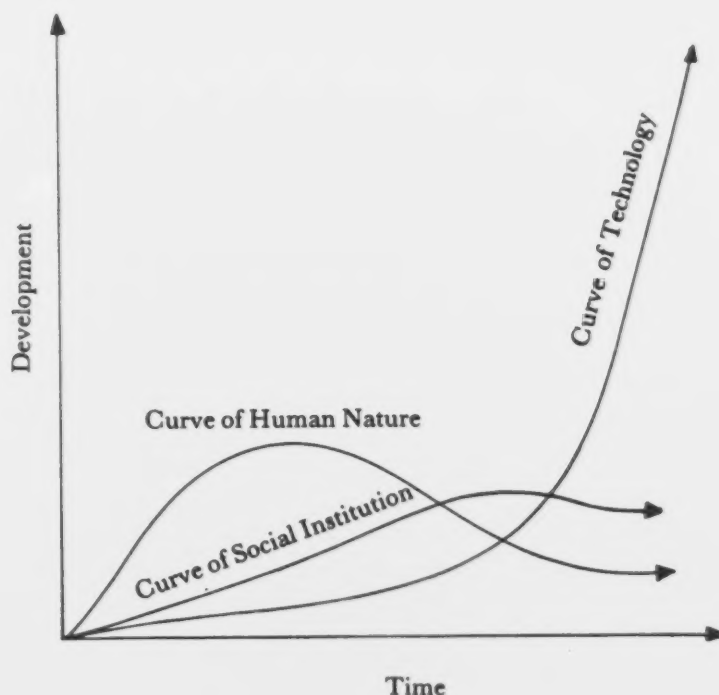


Figure 1... The Three Curves of World Development

This out- of- balance world development may be the major cause of all kinds of world troubles.

Even though technology is a big boon for material-economic development, it poses an inherent threat to the social-psychological well-being and the survival of mankind, if man is not wise enough to harness it.

How can man intelligently harness technology to serve him without causing any social-psychological harms to himself and his society? The answer lies in how man learns to harness his own mind in order to be the master of himself first, then he can be the true master of his own technology.

The problem is, how can man harness his own mind?

A Peaceful Approach to Lifelong Open Higher Education is specially designed to answer this particular question.

What is the "Balance of Nature" with regard to national development?

The Balance of Nature for national development is manifest in terms of three Dimensional Balanced and Integrated Development as illustrated in Figure 2

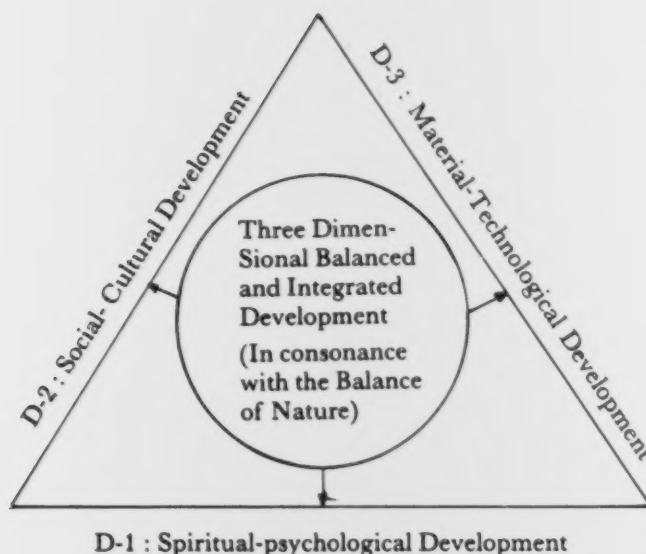


Figure 2 Three Dimensional Balanced and Integrated Development.

Dimension 1 : Spiritual-psychological Development.

This dimension is derived from the fact that the human mind is the most important component of man; hence a strong emphasis should be put on this dimension of development.

Dimension 2 : Social-cultural Development

This dimension is derived from the fact that man is a social being. He has to live with others in a society in order to survive. As for the case of national development, people's participation and democratic social institutions are essential factors contributing to the effective achievement of development goals.

Dimension 3 : Material-Technological Development.

This dimension is derived from the fact that the human body constitutes the material aspect of life and he has to survive in the material and economic environment through the use of technology.

Taking the three dimensional balanced and integrated development as a means, the expected goals of development are shown in Figure 3.

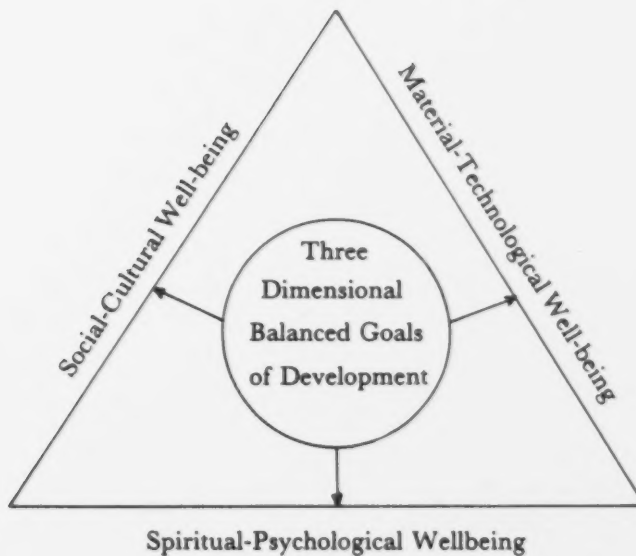


Figure 3 Three Dimensional Balanced Goals of Development.

When the development goals are framed within the Model of Three Dimensional Balanced and Integrated Development, what should be the educational goals, particularly at the level of higher education, So that the two sets of goals would be in consonance and complementarity with each other?

In the system of development education, higher education is taken as a means towards the goals of national development. As such, the goals of higher education would have to be congruent with the law "Balance of Nature", which in this case is manifest in terms of "Three Dimensional Balanced and Integrated Higher Education as shown in Figure 4

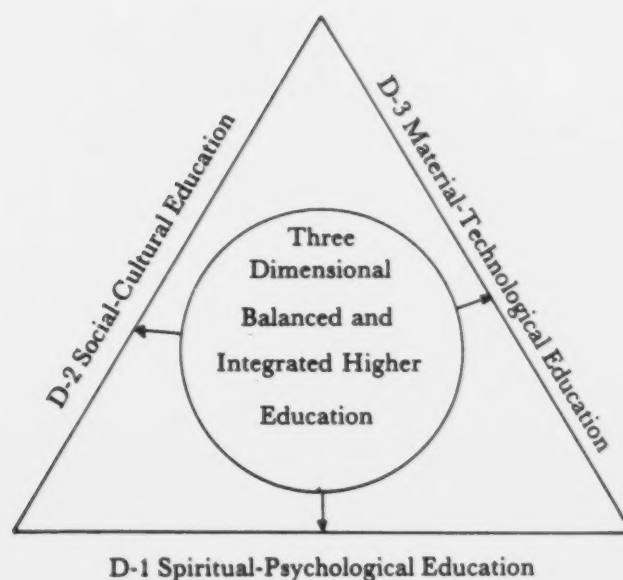


Figure 4 The Framework of Three Dimensional Balanced and Integrated Higher Education.

From this three dimensional framework, the goals of higher education can be derived as presented in Figure 5.

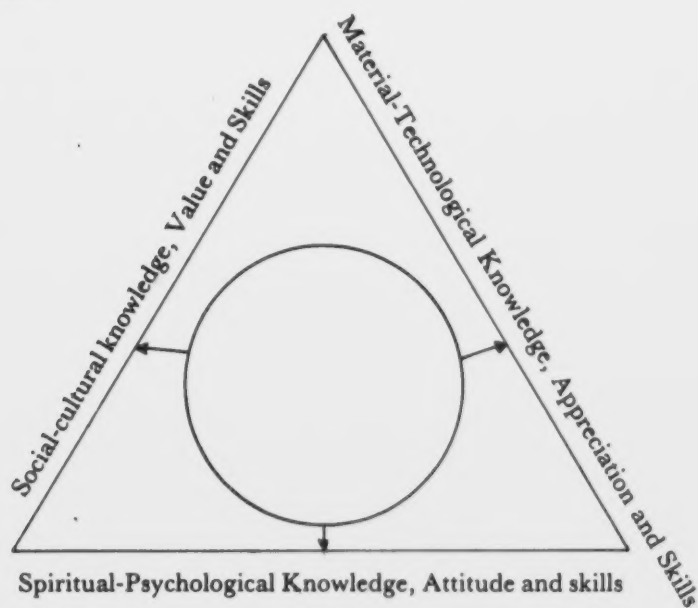


Figure 5 Three Dimensional Goals of Higher Education

2. Towards "Lifelong Open Higher Education : A Peaceful Approach"

The world megatrend for the present are is "Information Society" which has been inaugurated by electronic revolution and world communication network. Through innovative electronic technology such as computer and video equipment, a colossal amount of information can be stored, processed and printed out at a fantastic speed. At the same time the effective multi-media world communication network can transmit this well-processed information to all corners of the world within a short period of time.

The advent of this information age is a great challenge to higher education which has the biggest storage of knowledge and information. The question is how the institutions of higher learning can effectively utilize the available electronic and communication technologies to enhance their role in transferring knowledge, information and technology to the masses for the purpose of national development. The resolution of this problem will enable the seats of higher learning to meet the public demand for wider participation in higher education and at the same time respond to the urgent needs of national development for high quality manpower.

Is it really possible to provide higher education for the masses without lowering the standard and quality of higher education?

This paper proposes a treatise that with appropriate philosophy, policy, programs, methods, technology and systems, an effective higher education for the masses can be achieved through "Lifelong Open Higher Education for National Development : A Peaceful Approach".

Why do we have to capitalize on a peaceful approach to providing lifelong higher education for development?

Both education and development are characterized by producing changes for the better in a lifelong process. Education deals with changes of individual and institutional behaviors, whereas development deals with changes of social, economic and environmental conditions. These two kinds of changes are linked in a cause-and-effect relationship.

In dealing with changes, however, we should be very careful of consequences. Usually changes brought about by development may cause disorganization, confusion, and conflicts in the minds as well as in the society. Particularly in the developing countries, harmony, peace and happiness which are precious heritage of the traditional cultures may disappear as the result of development, and disharmony, conflicts and wars may come to take their places.

In order to safeguard these qualities of traditional cultures, a peaceful approach to organizing higher education for development is introduced into the system with an aim to promote spiritual-psychological development as a foundation for social-cultural and material-technological development.

3. A Peaceful Approach to Open Higher Education

There are at least three approaches to open higher education, namely, Academic Approach, Instrumental Approach, and Peaceful Approach.

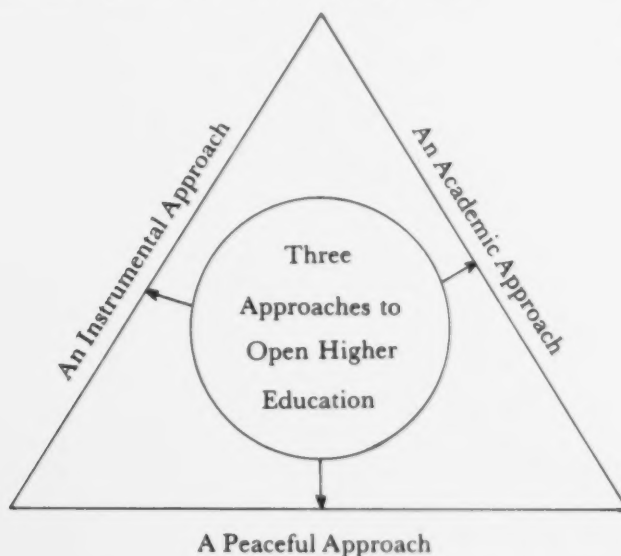


Figure 6 Different Approaches to Open Higher Education

The Academic Approach is the classic one, emphasizing academic excellence as its major policy and promoting the teaching and learning of theoretical knowledge as well as the advancement of each discipline.

The Instrumental Approach aims at utilizing higher education as a means for the development of life and society, emphasizing the application of knowledge to solving life and societal problems-as well as the search for new knowledge and technology for solving new problems.

The Peaceful Approach perceives higher education as processes for the development of **peaceful life and peaceful society**. This peaceful higher education has three dimensional balanced and integrated components of education as illustrated in Figure 7

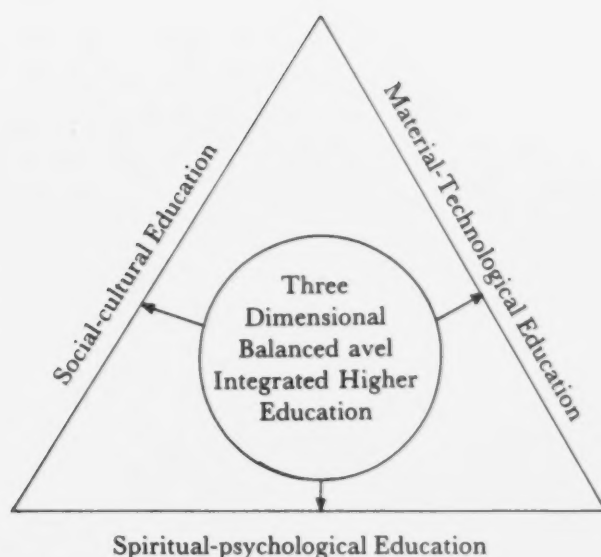


Figure 7 : Three Dimensional Balanced and Integrated Higher Education

Spiritual-psychological education comprises any courses of study which promote spiritual-psychological knowledge, competency and well-being of the learners.

Social-cultural education promotes social-cultural knowledge, competency and well-being of the learners.

Material-technological education promotes material-technological knowledge, competency and well-being of the learners.

4. Basic Concepts and Philosophy of Peaceful Lifelong Open Higher Education for National Development.

4.1 The Concept of Peaceful Higher Education

Education originated in the religious circles. The basic aim of traditional education was to develop individuals to achieve peace and happiness in life. Later on, secular education has gradually taken over the ecclesiastical education, and the basic aim has shifted the emphasis from spiritual to materialistic aspects of life.

A synthesis between the two trends of education can be achieved through international educational reforms and a peaceful approach to higher education. Within this context, one of the basic aims of higher education should promote peace of mind toward the goal of world peace.

This synthesis is happening in Thailand. A committee has been appointed by the National Bureau of Cultural Commission to study and develop a peaceful approach to higher education based on the wisdom of Buddhism.

As for the practical side of this peaceful approach, a department of lifelong education for the promotion of peaceful life and society is established at Ramkhamhaeng Open University.

4.2 The Concept of Open Higher Education

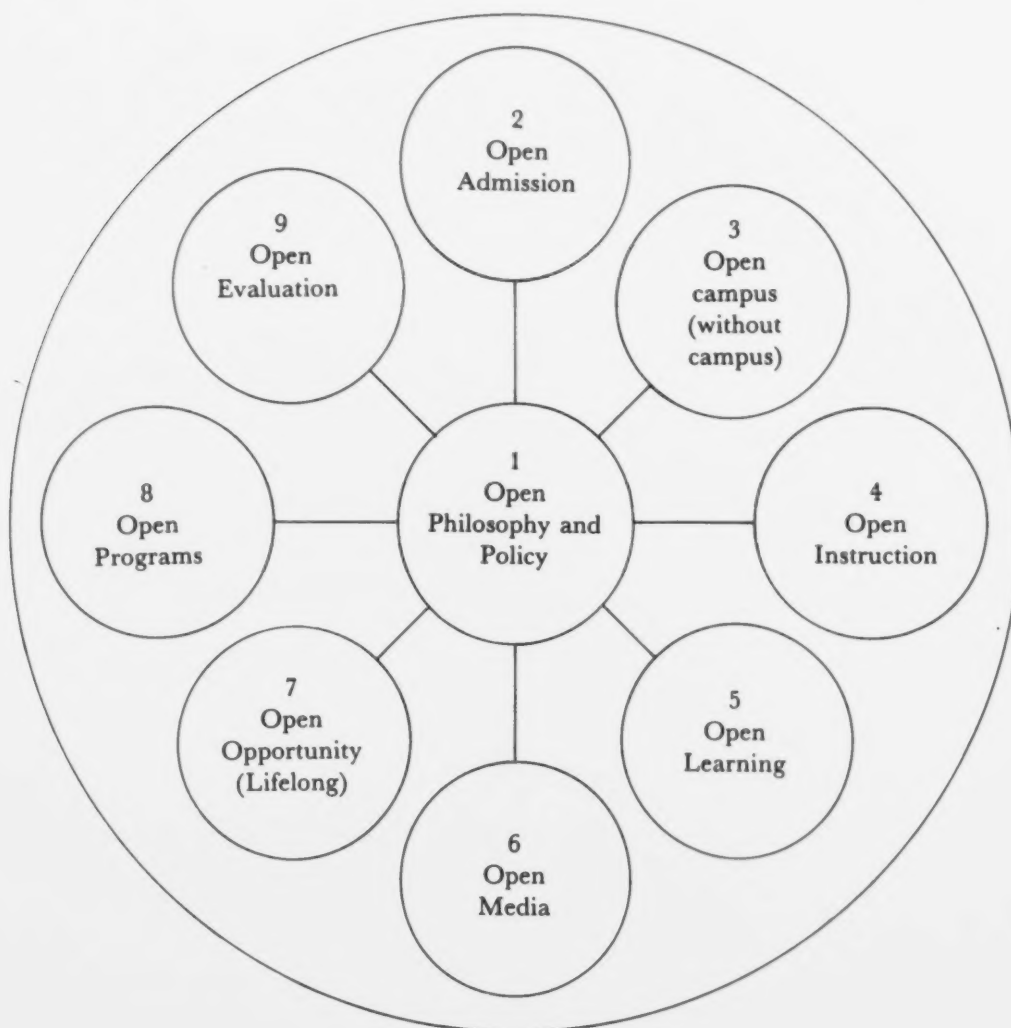


Figure 9 : Various Features of Open Higher Education.

Higher education in the open system has some or all of the following features:-

(1) *Open Philosophy and Policy.*

This feature is the most crucial one in characterizing open higher education. The open philosophy of higher education believes in potential learning ability of the masses in acquiring knowledge up to the level of higher education. It gives the highest

A peaceful approach to higher education is based on a philosophical notion that "Higher Education is a learning process for balanced development between mind and matter, individual and society for the goal of peaceful, happy, worthy life and society."

From this peaceful philosophy of higher education, educational goals and policy for peaceful life and society can be systematically derived. Once the goals and policy of peaceful higher education are established, Curriculum development in terms of programmes of study, methods of instruction and evaluation can be readily determined.

When a peaceful educational system is designed, a programme of peaceful higher education can be derived from it as shown in Figure. 8

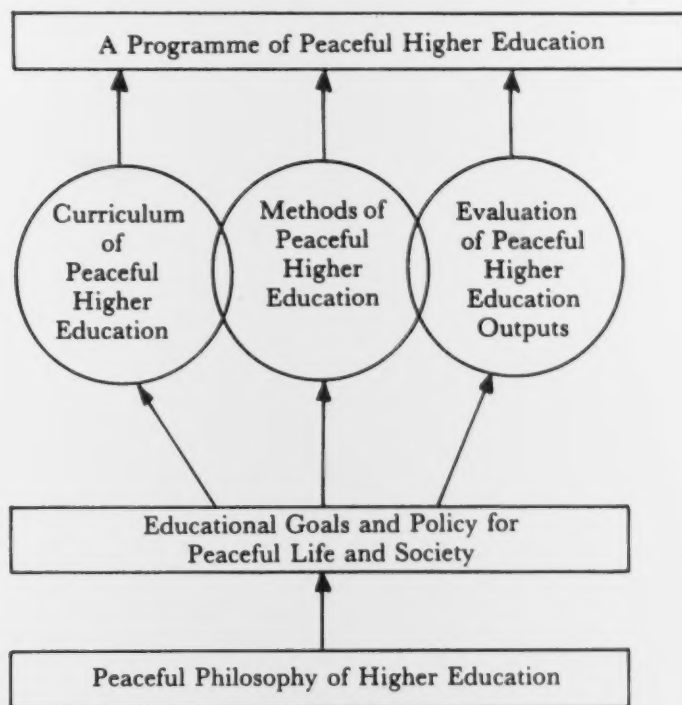


Figure 8 : Development of Peaceful Higher Education

value to human resource development which is the crucial input into the system of life and societal development. Education at all levels is viewed as the process for the liberation of human potentials and the emancipation of mankind from the slavery of ignorance, illness, poverty, and suffering. Education, in the last analysis, will set man free.

The open educational policy, based on the foregoing philosophical notion, is to open the door of higher education to all who desire to seek of the truth and happiness through education.

Ramkhamhaeng Open University has this feature.

(2) *Open Admission.*

Open admission is another important feature of open higher education. This feature means that all people who have the minimum qualification are admitted into the institution of open higher education.

Ramkhamhaeng Open University has this feature.

(3) *Open Campus.*

Usually an institution of open higher education has no campus. But for the case of Ramkhamhaeng Open University, we operate in both "closed" and "open" campuses, which mean that it is optional for the students to come to attend classes, or to study at home, or the combination of both.

(4) *Open Instruction.*

This feature means that active instruction by the instructors is optional. The educational materials are designed for self-instruction. Usually instruction comes in the forms of tutorial services and summary sessions. Ramkhamhaeng Open University provides active and summary instruction at the two campuses, and tutorial and summary services at the regional study centers.

(5) *Open Learning.*

Students at an open educational institution have the freedom to learn whenever they have time or feel like studying. They also have access to multi-media of learning and instruction. And the most convenience of all is that they can study at home, at work, or even in bed. They are also allowed to repeat a course of study several times until they pass it.

Students at Ramkhamhaeng have all of these learning alternatives.

(6) *Open Media.*

Open higher education programs can be offered in all kinds of educational and mass media.

At Ramkhamhaeng we offer the educational programs in the following media:-

- a. Audio tapes and texts.
- b. National television.
- c. Closed circuit T.V.
- d. National and local radios.
- e. Regional Study Centers.
- f. Video Tapes.

(7) Open Opportunity.

Open higher education can offer **lifelong education programs** by giving a wide opportunity for the masses to receive higher education or extension services at any time of their life.

At the moment, Ramkhamhaeng is planning to offer lifelong open higher education programs for rural development.

(8) Open Programs.

Educational programs of open higher education are usually very broad and open to the public through mass media. Thus the general public throughout the country can benefit from these educational programs without having to enroll as students.

Besides, open programs also mean that students can enjoy choosing the programs to suit their needs and interests. If they find out that the programs they are now undertaking are not suitable to their interests, they can easily change to other more promising programs.

Ramkhamhaeng is quite salient on this feature.

(9) Open Evaluation.

Evaluation in open higher education can be done in several manners-as follows:-

- a. Self-evaluation in terms of workbooks and manuals.
- b. Group evaluation in terms of study group or peer group evaluation.
- c. Local external evaluators in terms of utilizing the local specialists to take part in the evaluation process.
- d. On-the-job performance evaluation.
- e. Product evaluation.
- f. The regular paper-and-pencil evaluation.

As for Ramkhamhaeng, we plan to experiment with different kinds of evaluation in connection with the new programs on lifelong open higher education for rural development.

4.3 The Concept of Lifelong Open Higher Education.

Lifelong education begins in the womb and ends in the tomb. It embraces formal, non-formal and informal education. For a peaceful approach, the program of lifelong open higher education will place an emphasis on Moral Value and Peace Education as a foundation for other aspects of education.

There are three kinds and four types of lifelong open higher education.

Three kinds of Lifelong Education.

- (1) Home Education.
- (2) Community Education (including schools).
- (3) Mass Education.

Four Types of Lifelong Education.

- (1) Education for the development of peaceful mind and personality
- (2) Education for the development of life and work.
- (3) Education for the development of community.
- (4) Education for the development of the masses.

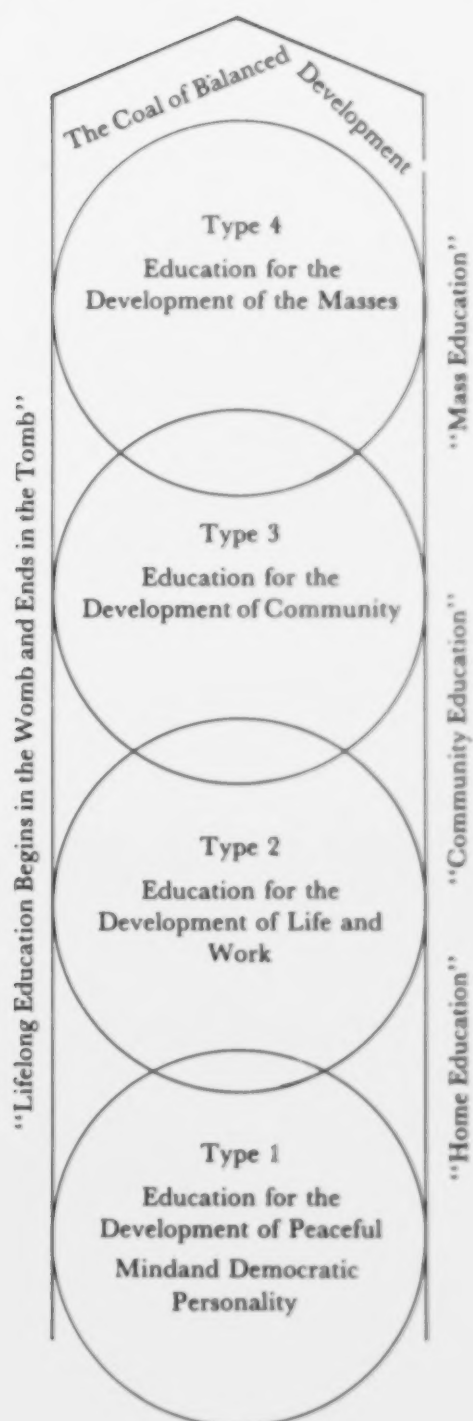


Figure 10 Three kinds and Four Types of Lifelong Education

4.4 Open Higher Education for National Development

Within the recent past, institutions of higher education have been pressured by the public for more accountability. This demand is even more acute in the developing countries where high - quality manpower is urgently needed for national development. Indeed, in the third world countries there are five basic areas of manpower requirements necessary for effective national development that can be efficiently satisfied by institutions of open higher education. These five areas of competencies are presented in Figure 11.



Figure 11 Basic Qualitative and Quantitative Manpower Requirements for National Development.

The task of national development requires not only the high - quality manpower to play leadership roles in executing development plans, it also requires a democratic organizational development for the promotion of effective and efficient management of development projects. This requirement is very crucial in the developing countries where the existing social organizations are usually obsolete or inappropriate for the effective administration of integrated and accelerated national development. Again, the institutions of open higher education can adequately facilitate democratic organizational development in five social systems as illustrated in Figure 12

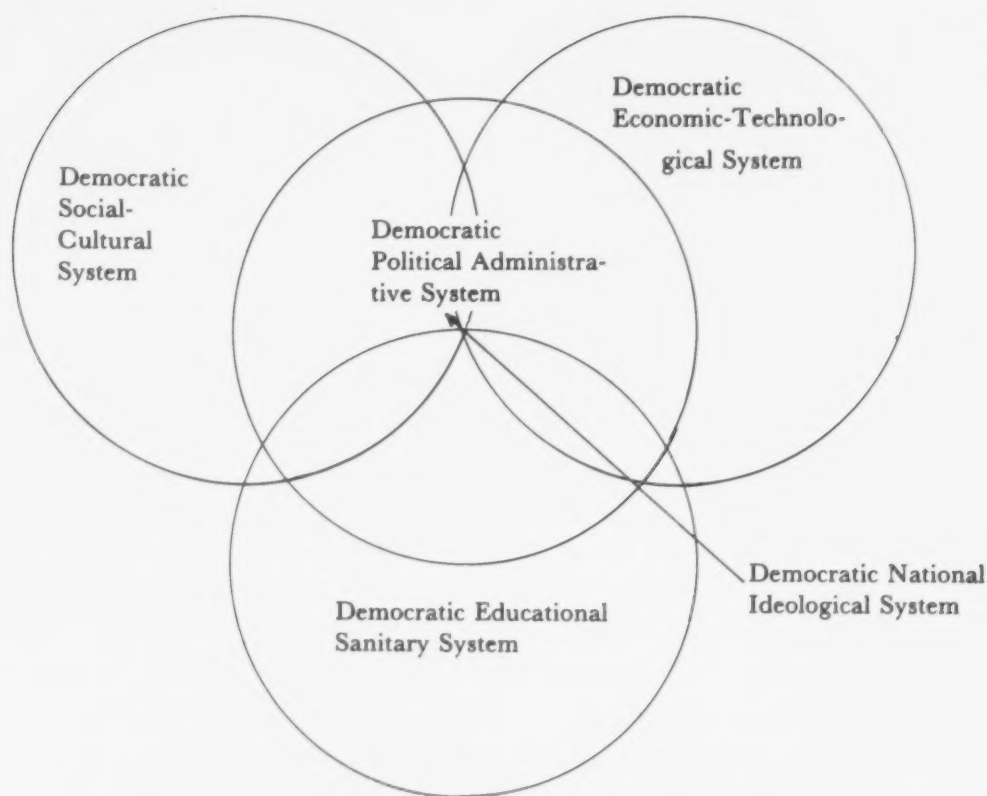
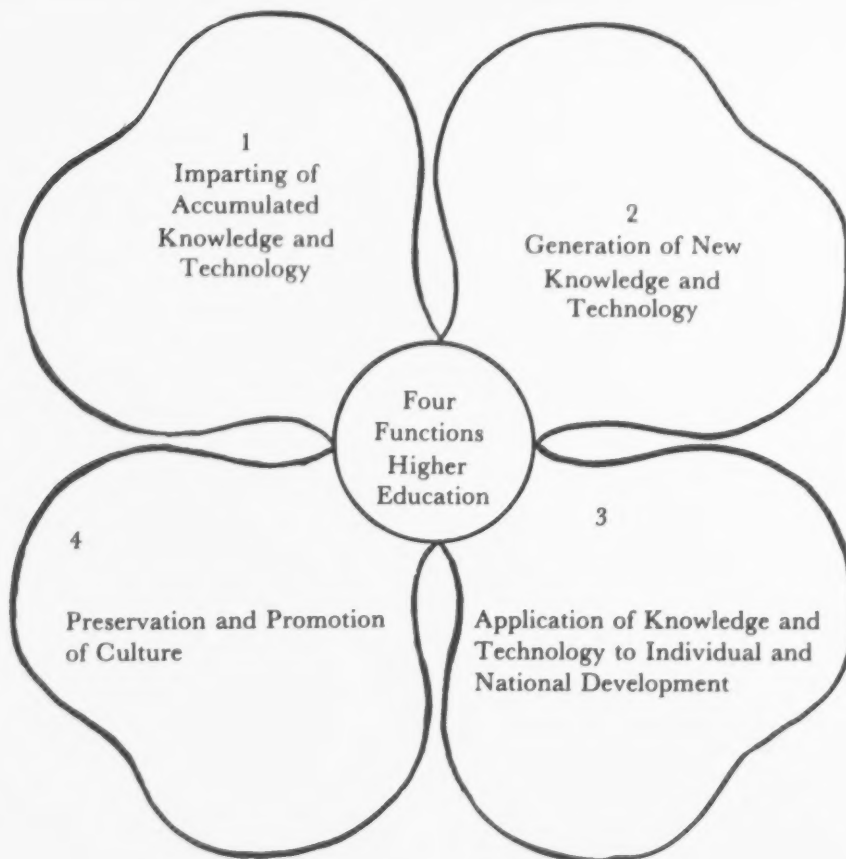


Figure 12 : Requirement of Organizational Development in Systems for National Development.

As for the case of Ramkhamhaeng Open University, we try to fulfil four functions of higher education as shown in Figure 13



5. Philosophy of Peaceful Lifelong Open Higher Education for National Development

Peaceful open higher education is a lifelong learning process toward the promotion of balanced and harmonious development between mind and matter, individual and social system, technology and environment, national progress and international well-being.

What does "balanced and harmonious development between mind and matter mean?

It means the development of human virtues, morals, peaceful minds and mental health side by side with the material progress.

When mind and matter are developed out of proportion, as in case of the present world, human vices, immorals, disturbed minds, nervous breakdowns and crimes prevail in life and society. Wars between and among nations may occur as the consequences of this imbalance.

What does "balanced and harmonious development between individuals and social systems" mean?

It means that individual liberty and freedom are properly delimited by social discipline, laws and justice, individual values and ideals are congruent with societal values and ideology, and the people are properly educated to be good citizens of a society. The individual and state powers are mutually checked and balanced.

When the individuals and social systems are developed out of harmony and proportion, social conflicts and problems will prevail. As in the case of the flower generation movement in the United States where a group of young humanistic people had protested against the materialistic status quo of the society.

What does "balanced and harmonious development between technology and environment" mean?

It means the development of technology that does not pollute nor destroy the environment.

But in the present world we have seen natural environment being polluted and destroyed by the advancement of technology due to the unbalanced and disharmonious development between the two.

What does "balanced and harmonious development between national progress and international well-being" mean?

It means international well-being as a whole is the goal of global development which can be effected by the progressive and developed nations trying sincerely and compassionately to help the backward and developing nations.

In the present world, some developed nations try to help, while some others try to exploit the developing nations. On the opposite side some developing nations receive foreign assistances with gratitude, while some others receive them with suspicion and hatred.

In this respect, the world is in need of international moral integrity which is a consequence of the development of moral integrity at the national and individual levels.

The peaceful approach to lifelong open higher education emphasizes **Moral Value and Peace Education** as a core program which is composed of several aspects contributing to a peaceful mind, a peaceful life, a peaceful society and a peaceful world as shown in Figure 14

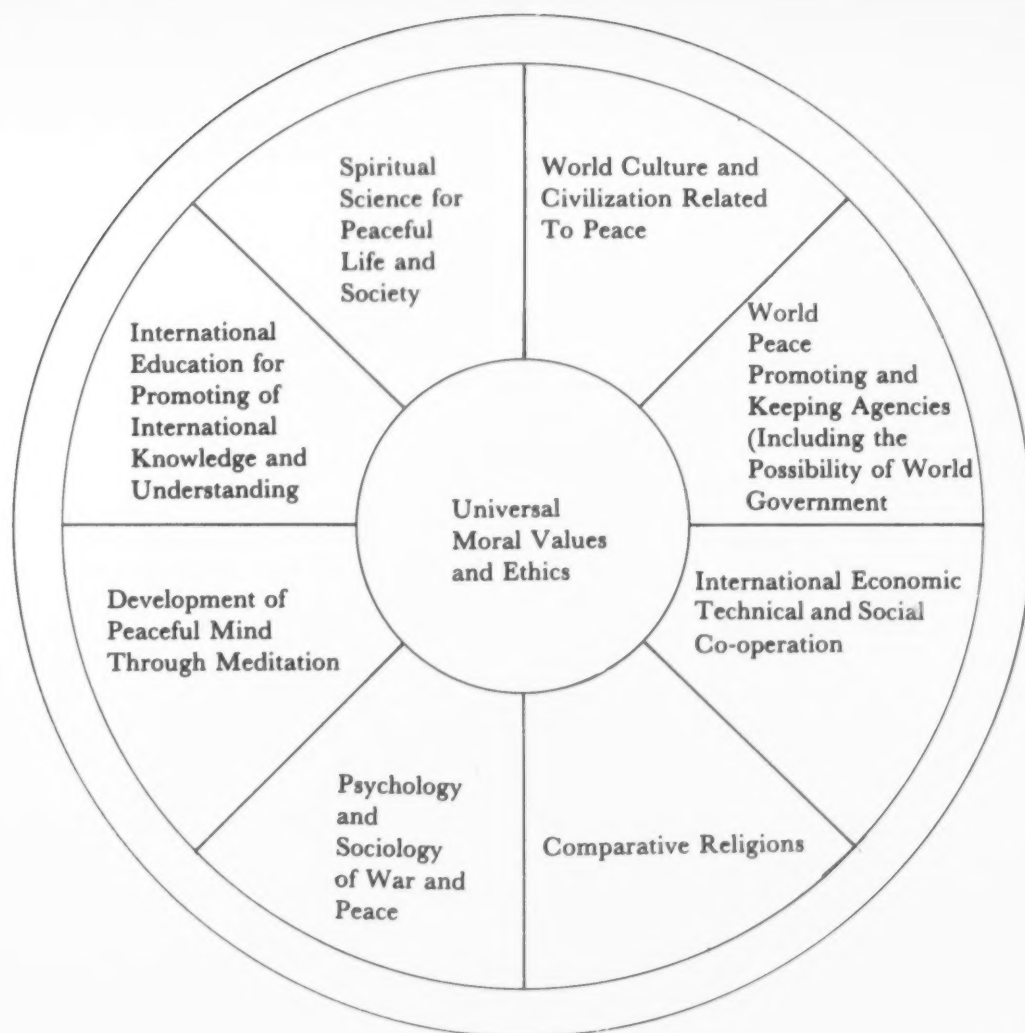


Figure 14 : Aspects of Moral Value and Peace Education. These eight components of moral value and peace education can be presented and taught as integrated subjects.

6. General Policy of Lifelong Open Higher Education for National Development

The general policy is presented in Figure 15

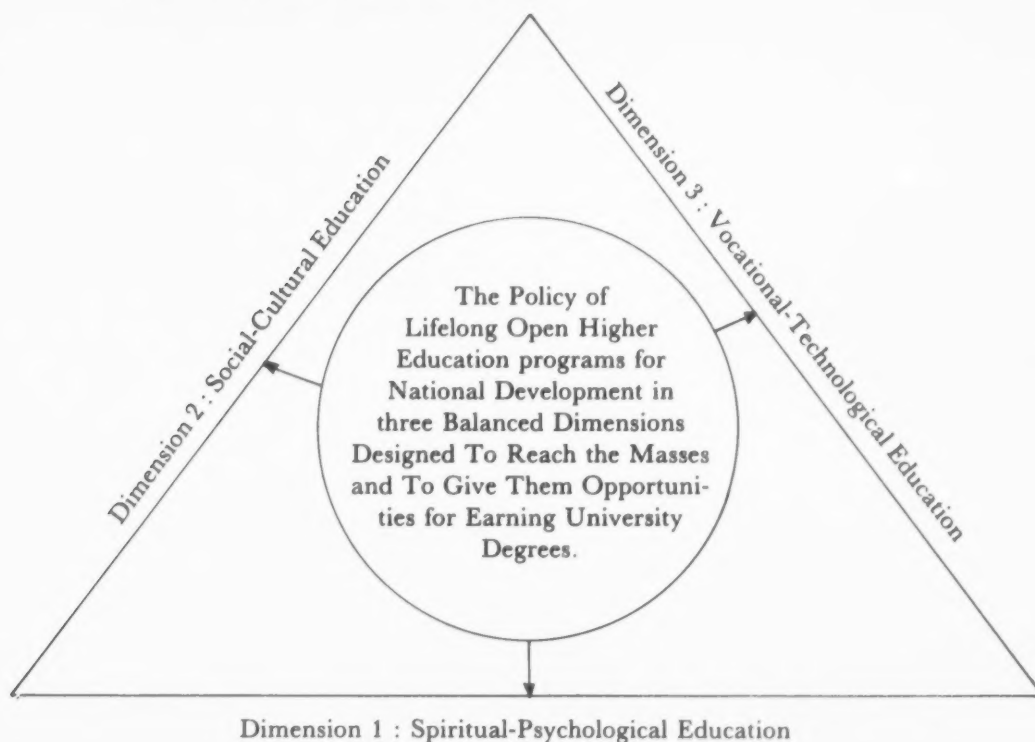


Figure 15 : The General Policy of Peaceful Lifelong Open Higher Education for National Development.

This general policy is designed for the national development in three balanced dimensions illustrated in Figure 16.

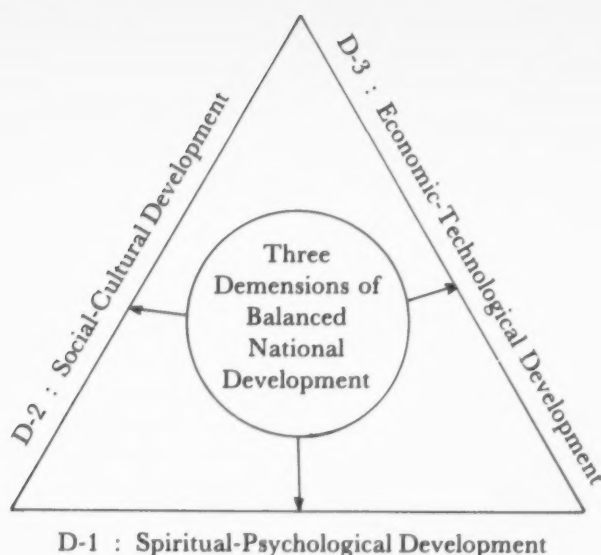


Figure 16 : National Development in Three Balanced Dimensions.

This conceptual model of three dimensional balanced national development serves as a rationale for the formulation of the educational policy.

Policy development for the peaceful lifelong open higher education can be achieved in a systems approach as shown in Figure 17.

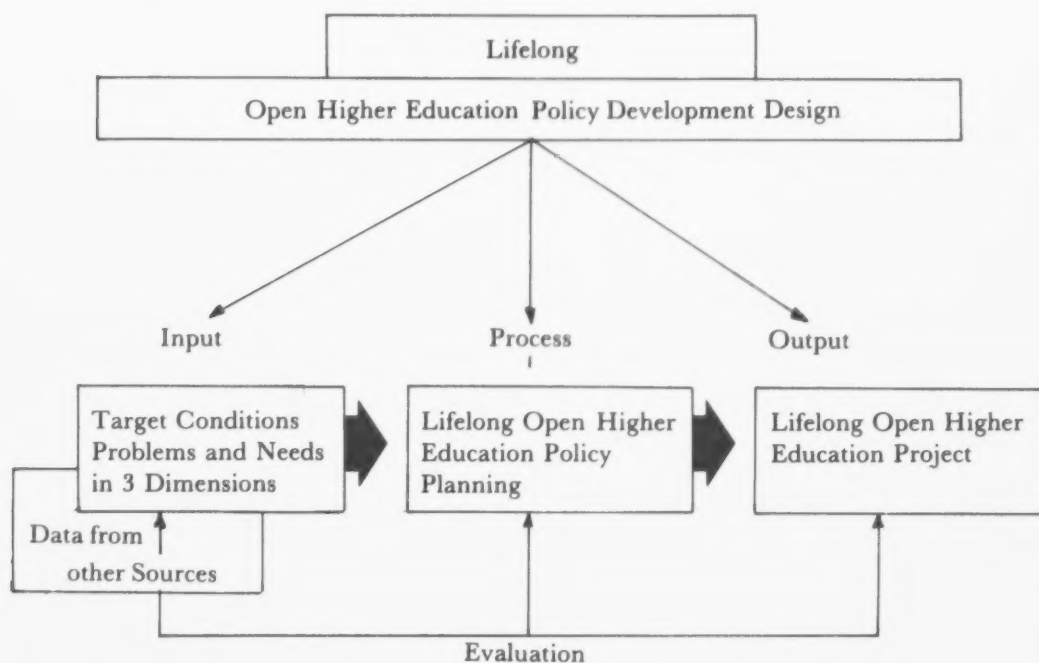


Figure 17 : Policy Development Design : A Systems Approach

7. Basic Principles of Peaceful Lifelong Open Higher Education for National Development.

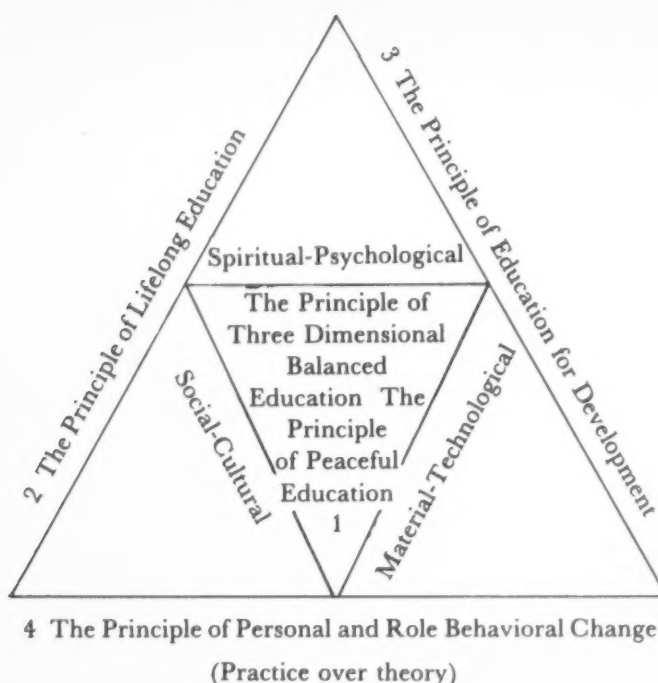


Figure 18 : The Basic Principles of Peaceful Lifelong Open Higher Education for National Development.

8. Basic Objectives of Peaceful Lifelong Open Higher Education for National Development.

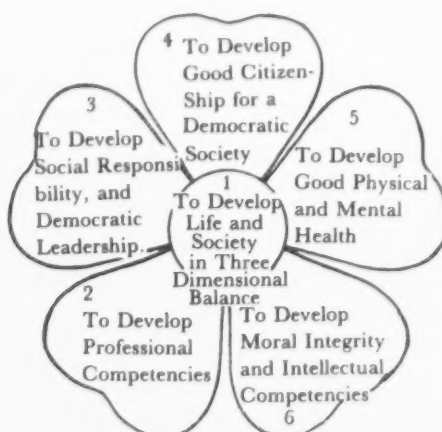


Figure 19 : The Basic Objectives of Peaceful Lifelong Open Higher Education for National Development.

9. Curriculum and Programs of Peaceful Lifelong Open Higher Education for National Development.

In general, the curriculum of peaceful lifelong open higher education is composed of the following basic components with the spiritual sphere located at the centre as shown in Figure...

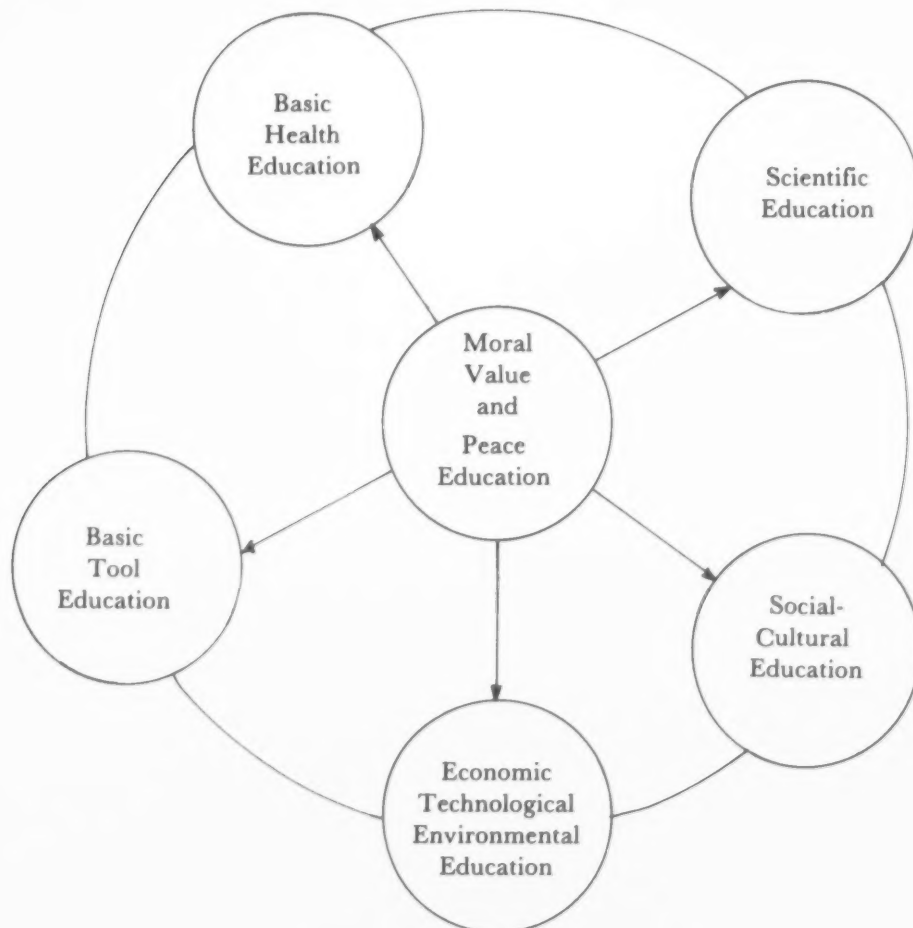


Figure 20 : Curriculum of Peaceful Lifelong Open Higher Education.

The educational programs derived from this curriculum design are presented in Figure 21

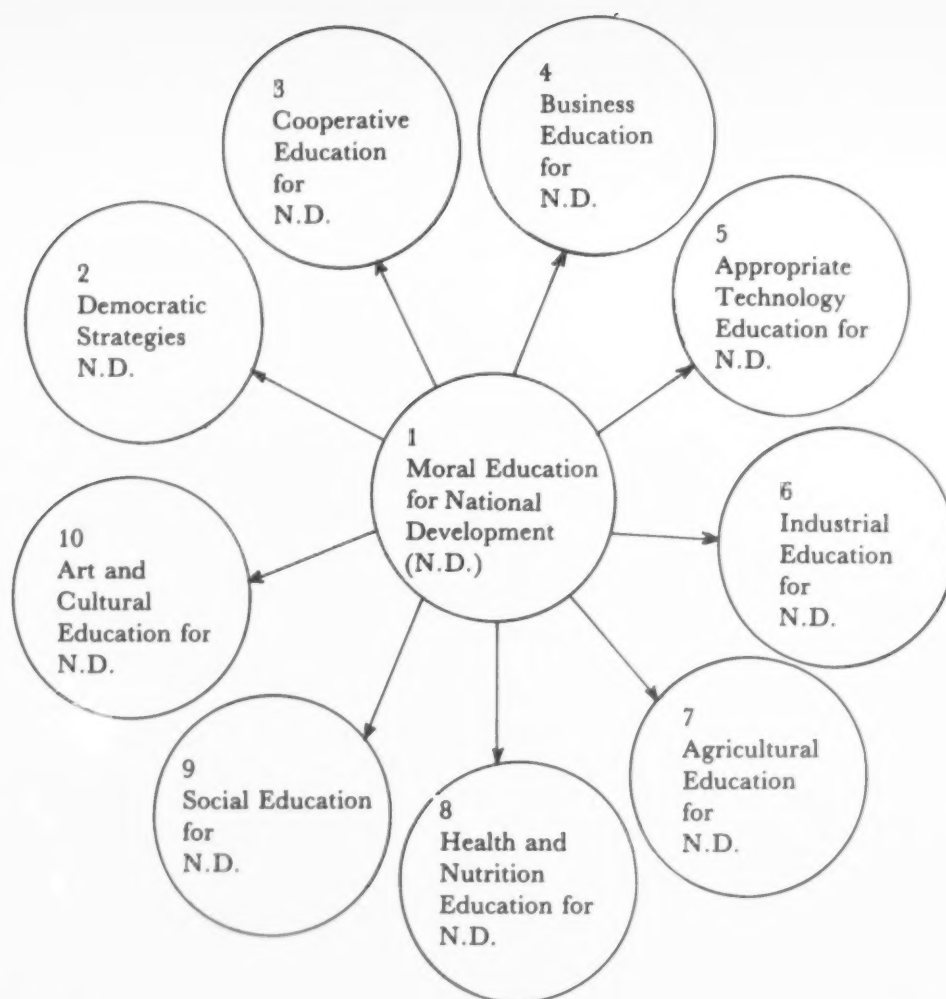


Figure 21 : Educational Programs of Peaceful Lifelong Open Higher Education for National Development.

At Ramkhamhaeng, some courses of Study already exist in the seven faculties.

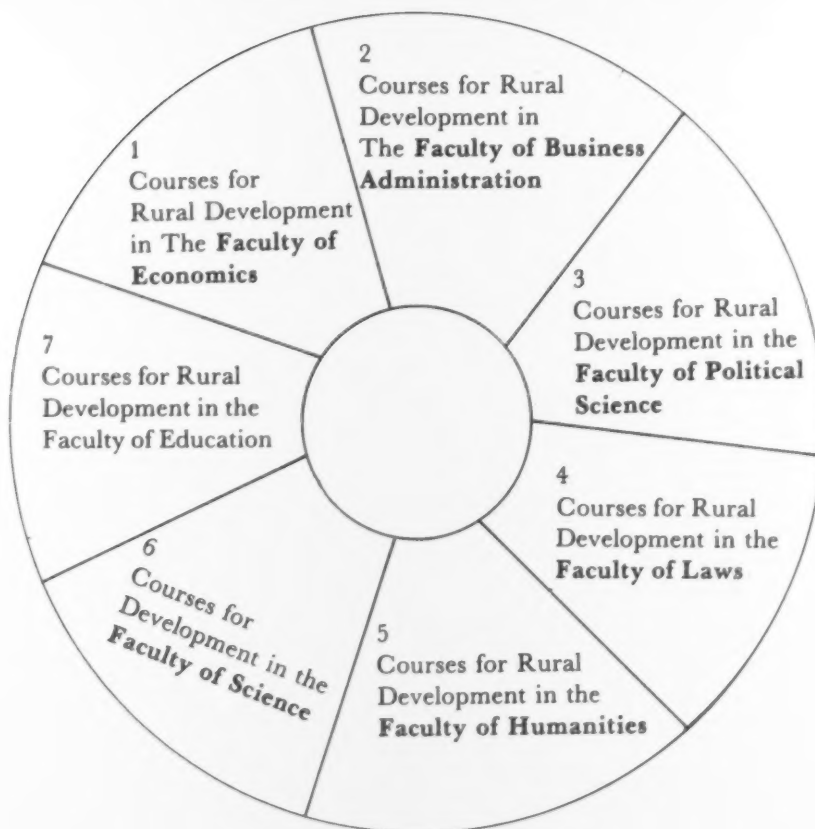
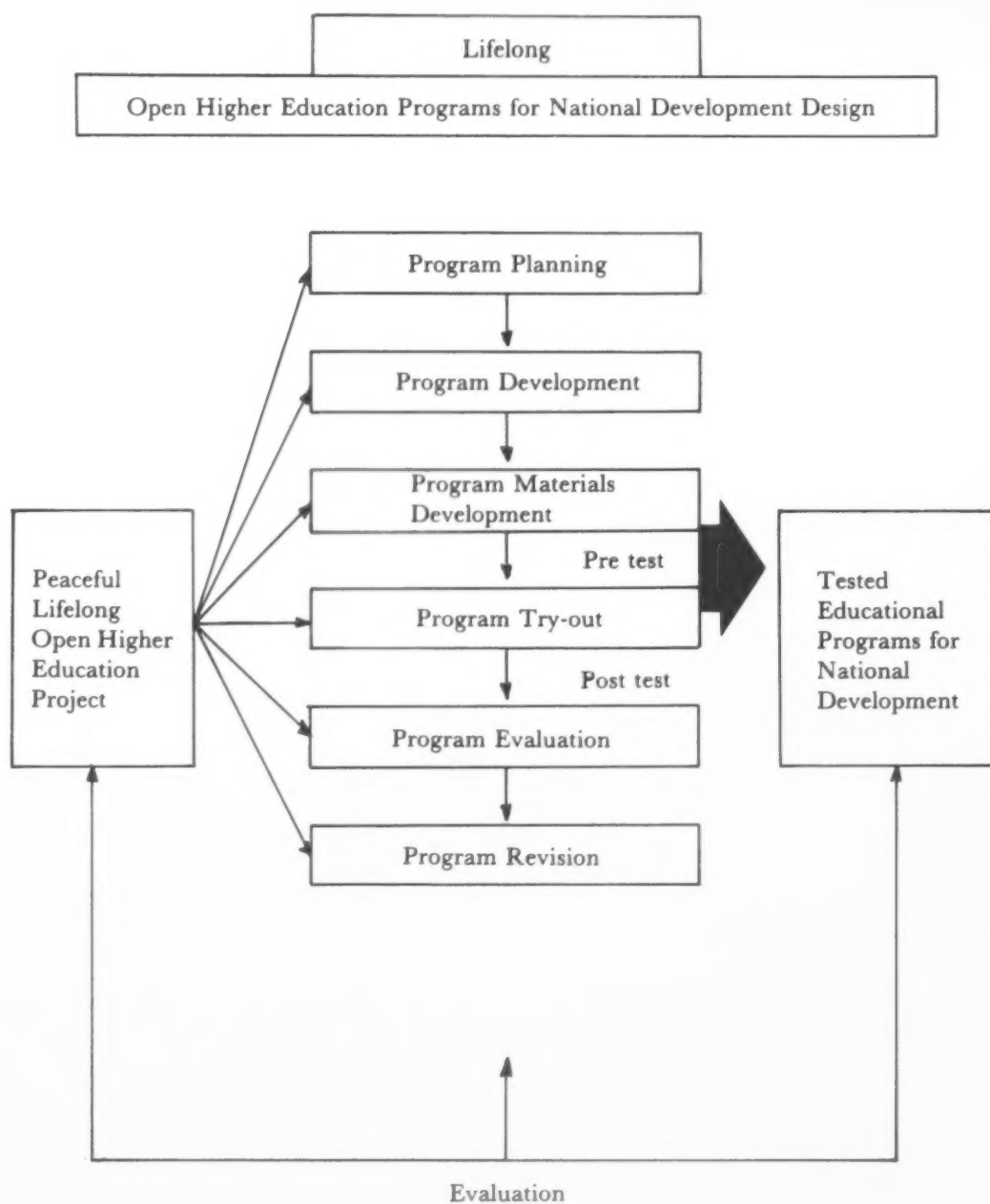


Figure 22 : Some Existing Programs Related to Rural Development

The education program development can be achieved through a systems approach presented in Figure 23

Figure 23 : Educational Program Development



10. Program Interlinkages Among Government Agencies, Private Organizations and Institution of Open Higher Education.

The peaceful lifelong open higher education programs for national development will be most effective when they are interlinked among Government Agencies, Private Organizations and Institution of Open Higher Education.

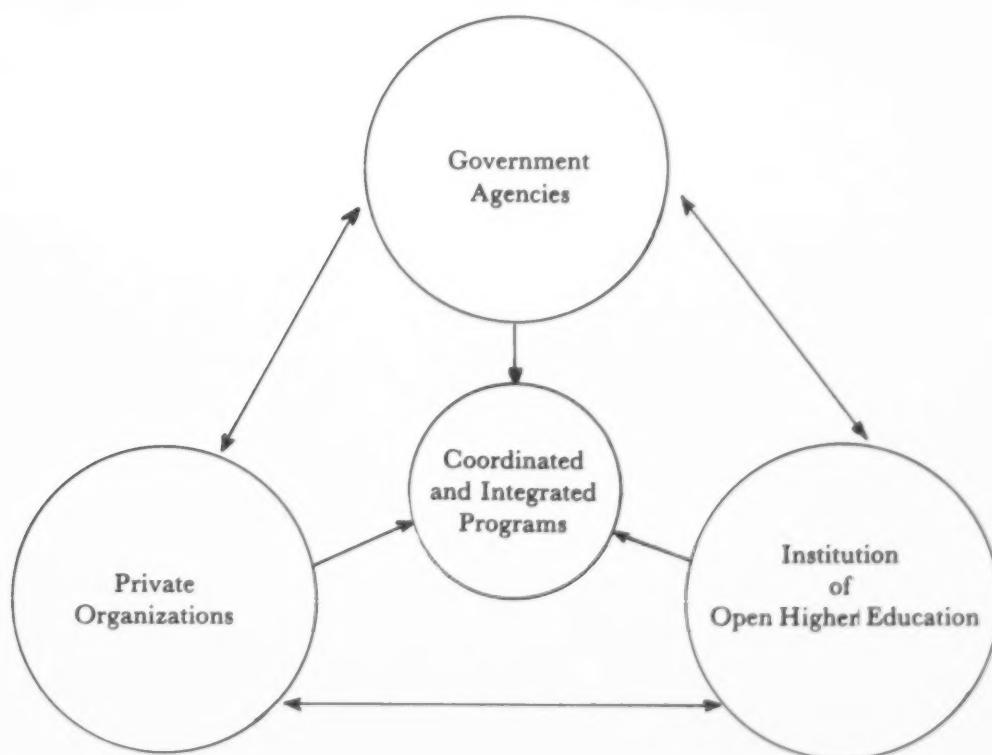


Figure 24 : Coordinated and Integrated Programs of Open Higher Education for National Development.

11. Target Populations for Peaceful Lifelong Open Higher Education for National Development.

The following target populations are suggested for the third world countries:-

- (1) Farmers
- (2) Government Officials
- (3) Laborers and workers
- (4) Housewives
- (5) Managers
- (6) Office Workers
- (7) Businessmen

- (8) Industrialists
- (9) Social Workers
- (10) Prisoners
- (11) People in other professions
- (12) Youths with Employment
- (13) Soldiers

12. Minimum Qualifications for Admission

The Minimum qualifications for admission into the programs of peaceful lifelong open higher education are the following :-

- (1) Completion of Compulsory Education
- (2) Working Status
- (3) Tax Payer Status

13. Pre- University Programs as Stepping Stones to Higher Education.

Students who have the aforementioned minimum qualifications will be enrolled in a pre - university preparation programs which are designed to develop independent learning abilities and to make them ready for the intellectual requirement of higher education. For this purpose, AN - OEPC Inquiry Method of Peace can be used.

14. An Inquiry Method of Peace for Lifelong Open Higher Education.

Methods of peaceful education usually can be derived from the religious principles. As for Thailand, the four noble truths in Buddhism can be utilized as a fountain for development of the methods of peaceful education. One of these methods as derived from the noble principles is AN - OEPC Inquiry Method.

What is AN - OEPC Inquiry Method?

It is basically a method of problem-solving, utilizing the inquiry questions as a major medium of learning and instruction. This method has been developed by the author in 1970. It has five interrelated steps in discovering the truthful and causal relationship between events, concepts and variables. This method is based both on the four noble truths and the scientific method.

The letters AN - OEPC stand for the five steps of this method.

AN - Advance Notion on basic concepts, motivation, and behavioral patterns.

- O - Observation in a comparative context for the identification and analysis of problems.
- E - Explanation for the causes of the problems.
- P - Prediction and Proof of the explanatory theory.
- C - Creative control of the internal and external environments of man through applying the confirmed theory and principles in solving the problems at the causal level. The control of internal environment of man is through the application of ethics and moral principles, whereas the control of external environment is through the application of science and technology.

Structurally arranged, these five steps may be illustrated in Figure 25.

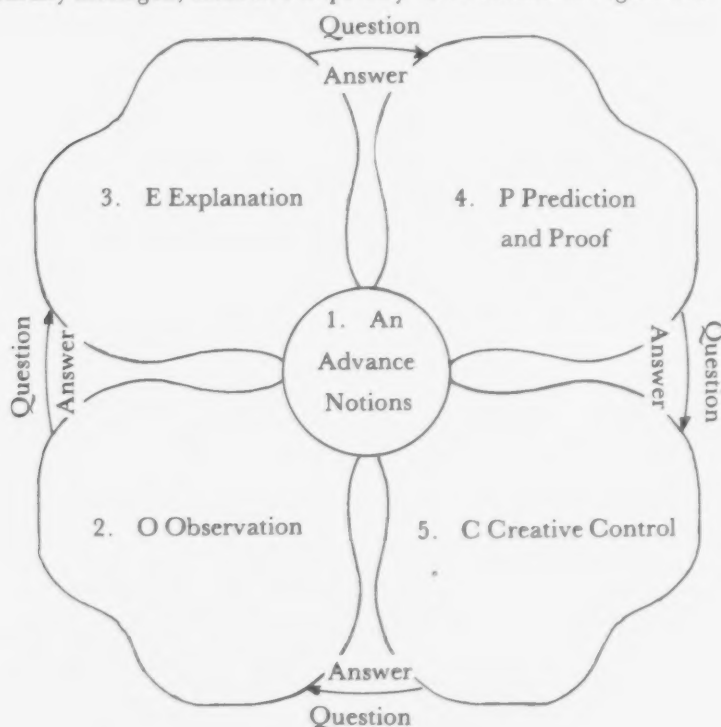


Figure 25 : AN - OEPC Inquiry Method: "An Inquiry method of Peace"

15. The New Development Dimension at Ramkhamhaeng University

15.1 A Time for Expansion of Horizon.

Recognizing that the major role of higher education is to develop high quality human resources for the development of life, society and natural resources,

Considering the enormous size of student population at Ramkhamhaeng Open University who come from all over the country.

Being aware of the urgent needs for rural development of Thailand ; and

Focusing on the various media of distance education operated by ROU;

It seems very appropriate and timely for ROU to improve and expand its existing formal educational Programs to meet the needs of rural people in developing their lives and communities for national security and prosperity.

In order to effectively improve and expand the existing educational programs, for the purpose of serving rural development ROU needs to take the following measures:-

- 1) Survey the conditions, problems and needs of rural development.
- 2) Modify the existing educational policy to be more responsive to the conditions, problems and needs of rural development.
- 3) Develop criteria in accordance with the new policy for the evaluation of existing educational programs.

- 4) Improve the existing educational programs to be more responsive to the needs of rural development.
- 5) Develop new educational programs to suit special conditions, problems and needs of rural development.
- 6) Implement the new programs.
- 7) Evaluate new and improved program efficiency and effectiveness.

These seven measures require research, development and diffusion capability of ROU.

15.2 Research Problems.

The following questions will be considered as research problems :-

- (1) How do we identify the human resource conditions, problems and needs in relations to the tasks of rural development?
- (2) What should be the educational policies of ROU as a response to the urgent needs of rural development?
- (3) How do we design distance education programs appropriate for the rural masses to apply to the tasks of rural development?
- (4) Can we provide distance education programs of this nature as a part and parcel of the existing programs in a **lifelong Process**?

(Lifelong process is used in the sense that the rural masses have the opportunity to receive various kinds of distance education throughout their lives, if they so desire.)

- (5) How do we effectively transfer knowledge, science and technology from the university to the villages for the purpose of promoting rural development?
- (6) How do we promote a three dimensional balanced development in the rural settings?
 - D - 1 : Spiritual Psychological Development through religious principles.
 - D - 2 : Social cultural Development through democratic principles.
 - D - 3 : Material Technological Development through economic principles (e.g. Cooperative Approach).
- (7) How do we evaluate the educational program effectiveness and project success?

15.3 Research Objectives

The objectives of this RDD Project are as follows:-

- (1) To identify the conditions, problems and needs of leading groups of villagers in relations to the task of rural development.
- (2) To utilize research data, both from primary and secondary sources, in developing educational policies for rural development.
- (3) To evaluate the existing educational programs by using the criteria of rural development.
- (4) To design new and improved distance education programs for rural development, and to expand the program downward to "University Preparation Program"
- (5) To study effective ways of distance education programs implementation.
- (6) To evaluate program and project effectiveness.

15.4 Research Significance

- (1) A practical measure to transfer knowledge, science and technology at the university level to the rural masses for rural development.
- (2) It is an open up of a new opportunity for rural villagers to receive higher education relevant to the development to their lives and communities, and may lead to the earning of a degree.
- (3) It is a significant contribution to the manpower development requirements of the Fifth and Sixth National Socio-Economic Development Plan.
- (4) It is an opportunity for ROU to effectively improve the existing policies and programs and to strengthen the RDD capabilities.
- (5) To enhance the ROU's roles in the development of life and society in terms of rendering services to communities throughout the country.

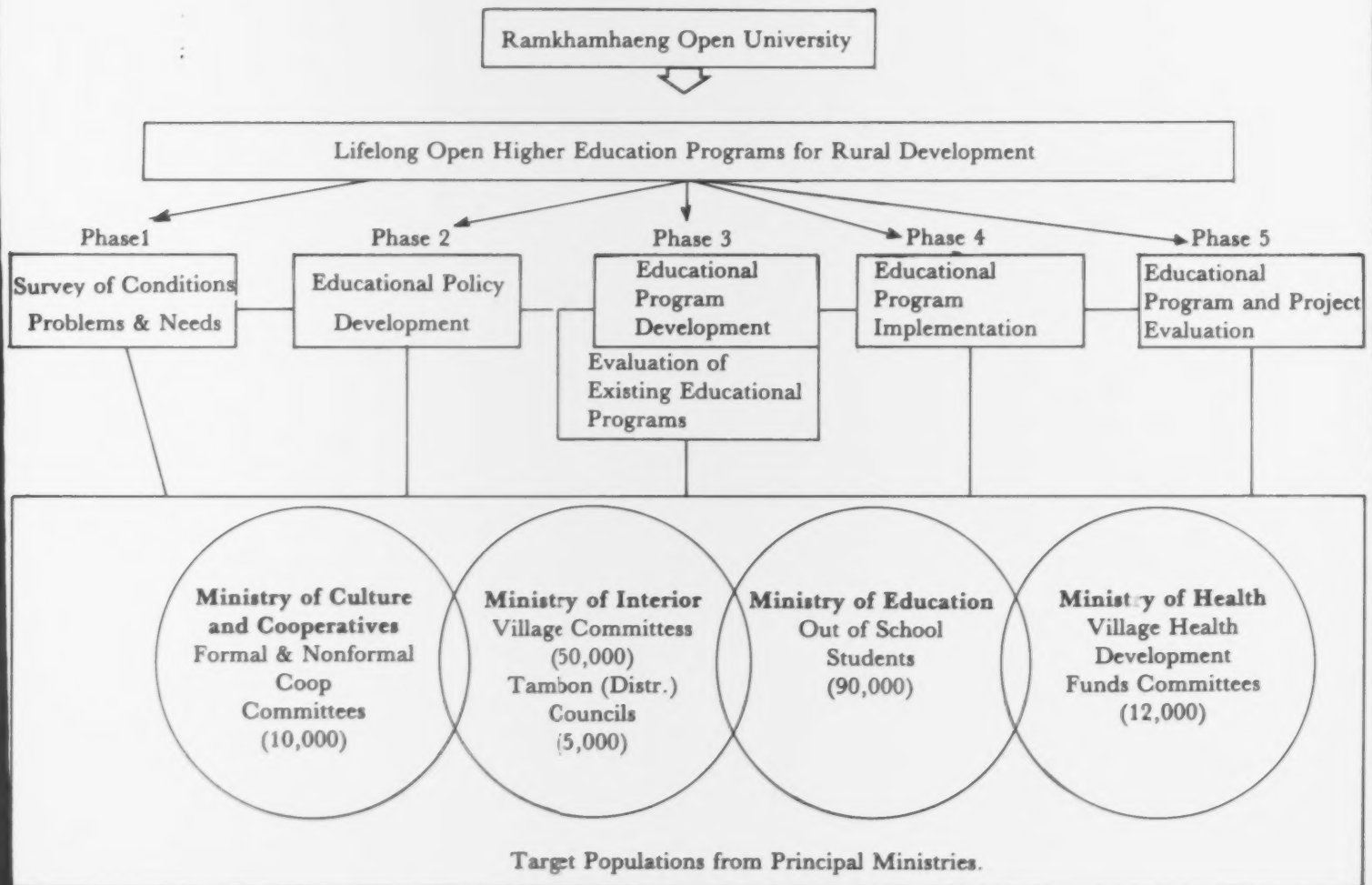
15.5 Research Conceptual System Design

The research conceptual system design presented in Figure 1 is for the purpose of giving the total picture of the RDD Project which is divided in to five phases:

- Phase 1 : Survey of Conditions, Problems and Needs of the rural target populations.
- Phase 2 : Educational Policy Development. This phase will utilize the survey data for the formulation of educational policy within the conceptual frame of lifelong distance education for rural development.
- Phase 3 : Education Program Development.
This phase has two subtasks. **The first task** is evaluation of the existing educational programs against the criteria of rural development. **The second task** is development of new educational programs to suit the needs of rural development.
- Phase 4 : Educational Program Implementation.
This phase is the diffusion stage of the project when the tried-out programs are implemented by the university.
- Phase 5 : Education Program and Project Evaluation.
This phase will involve the evaluation of the educational programs as well as the research project itself.

The research conceptual system design is presented in the following system flow chart.

Figure : Research Conceptual System Design



16. Conclusion

In these few decades, the world has seen many major developments in material-technological dimension, such as the wonderful development of computers, the advancement of satellite telecommunication, the god-like achievement in space exploration, and the invention of robots to replace the labor force of man. But in the social-cultural dimension, the whole world seems to be torn apart by social unrests, revolutions, and wars. Yet in the most crucial spiritual-psychological dimension, moral degradation has come to the deplorably low level, even to the point of claiming that "God is dead"

What is wrong with the modern world civilization?

The answer seems to be the fact that the modern world civilization has been developing in disharmony with the law of nature, particularly, the Balance of Nature". The world has been developing in the material-technological dimension too far ahead of the developments in social-cultural and spiritual-psychological dimensions, thus causing the total development of civilization to be out of balance, which brings about bad social-cultural and spiritual-psychological consequences.

How can we solve this problem of unbalanced development?

A peaceful education, based on the principle of three dimensional balance, seems to provide a fundamental solution to this problem, simply because education plays the most important role in the development of human resources, which are the vital forces for the development of world civilization.

Higher education, being the summit of the educational system, can play a leadership role by providing innovative programs of "Peaceful Lifelong Open Higher Education for National Development". If this new role of higher education around the world is successful, probably "World Peace" would emerge out of "Man's Peaceful Mind".

SECTION II

“LIFELONG OPEN TEACHER EDUCATION FOR DEVELOPMENT : A PEACEFUL APPROACH”

Lifelong Open Teacher Education For Development : A Peaceful Approach

A Model of Peaceful Teacher Education.

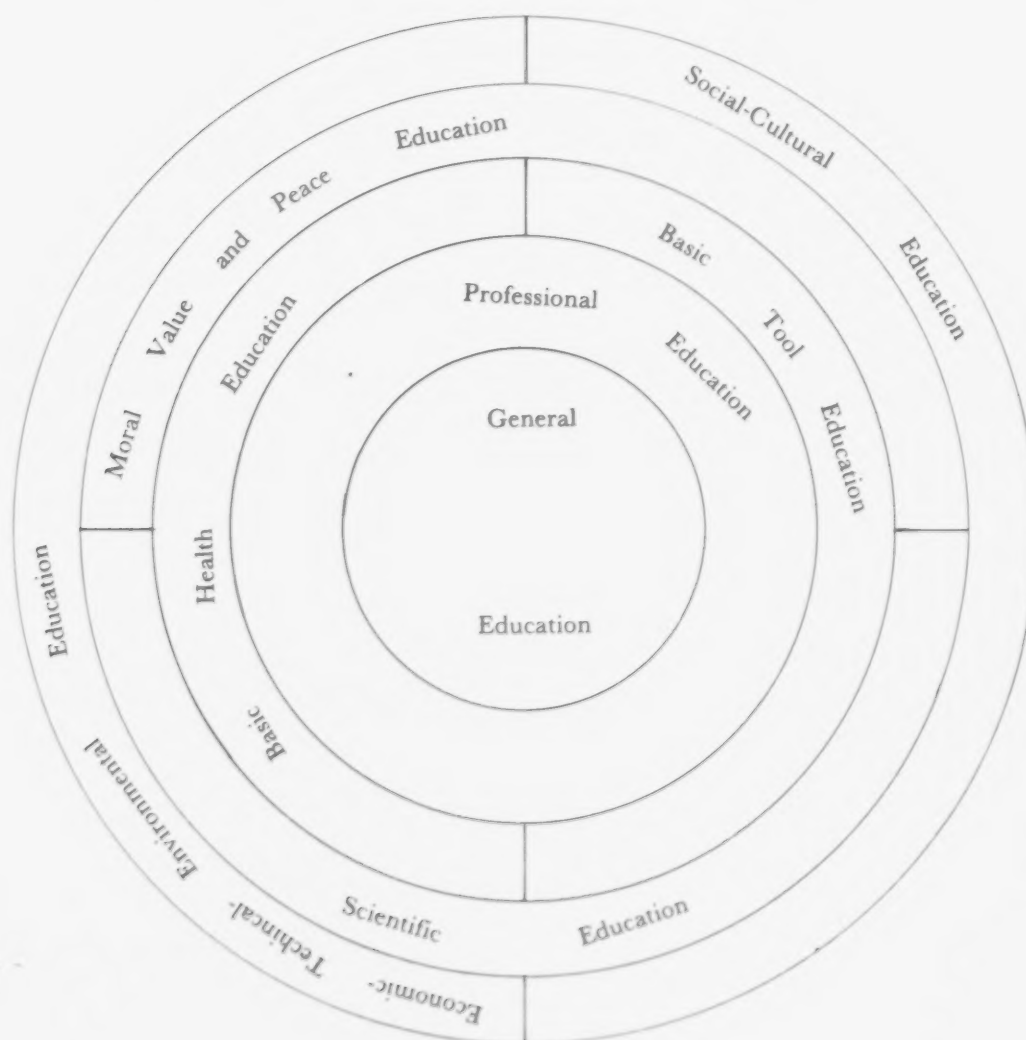


Figure 1. A Model of Peaceful Teacher Education.

This model of peaceful teacher-education is presented as a general approach which can be adjusted to suit regular programs of teacher training institutions. The basic requirement for the application of this model is that the regular educational system would have to be re-adjusted to fit the "Philosophy of Peaceful Education" in terms of educational objectives, curriculum design, methods of teaching, and evaluation of educational outcomes.

1. The Basic Aims of Peaceful Teacher Education.

Teachers are regarded as the secondary fathers and mothers of children, and in fact in the modern sector of society where parents rarely have time to be with their children, teachers are entrusted with more and more responsibility as major socializing agents of children. On this basis, teachers are given a crucial opportunity to develop peaceful mind and personality in students by providing them with both academic and character education in a balanced proportion. Many private and independent schools in Europe, America and Asia usually offer this dual education to their students.

If teachers are to effectively provide "peaceful education" to students, they have to be specially trained to do so, because peaceful education is a delicate matter dealing with spiritual development as a foundation for character development.

The basic aims of peaceful teacher education are as follows:

- 1.1 To develop peaceful personality in teachers.
- 1.2 To develop teacher competencies in Moral Value and Peace Education.
- 1.3 To develop teacher competencies in integrating Moral Value and Peace Education with other subject areas such as Social-cultural Education and Scientific Education.
- 1.4 To train teachers to have balanced competencies for the promotion of spiritual, material and social developments in the learners, as shown in Figure 2.

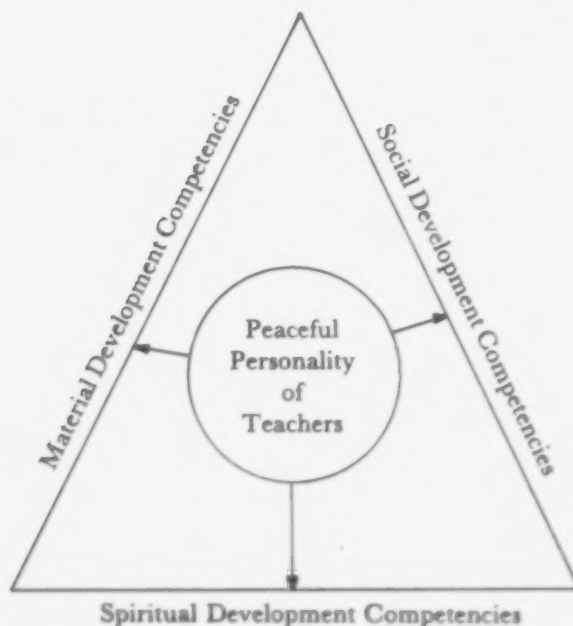


Figure 2. Balanced Teacher Competencies for Spiritual, Material, and Social Developments of Learners in Peaceful Education

From Figure 2, the central aim of peaceful teacher education is the development of peaceful personality of teachers who are characterised by having peace of minds, humanistic values and international attitudes. Around this personality type is built three sets of basic and balanced Teacher Competencies for Spiritual, Material, and Social Development of Learners.

Among these three sets of basic teacher competencies for peaceful education, the Spiritual Development Competencies are the missing component of modern teacher education. This missing component is crucial for the development of peace of mind which, according to the postulation of the author, is the grassroots of world peace. In addition, the Spiritual Development Competencies are essential for rendering a "humanizing effect" to the Material and Social Development of the learners.

2. Balanced and Peaceful Teacher Competencies Derived From Basic Dimensions of Life.

The three basic teacher competencies are derived from the three basic dimensions of life as shown in Figure 3.

Life is composed of Mind and Body which are considered to be its Spiritual and Material Dimensions. The third dimension of life is derived from the fact that a human life cannot exist alone, he has to live in a society, hence the Social Dimension is essential for the existence of life.

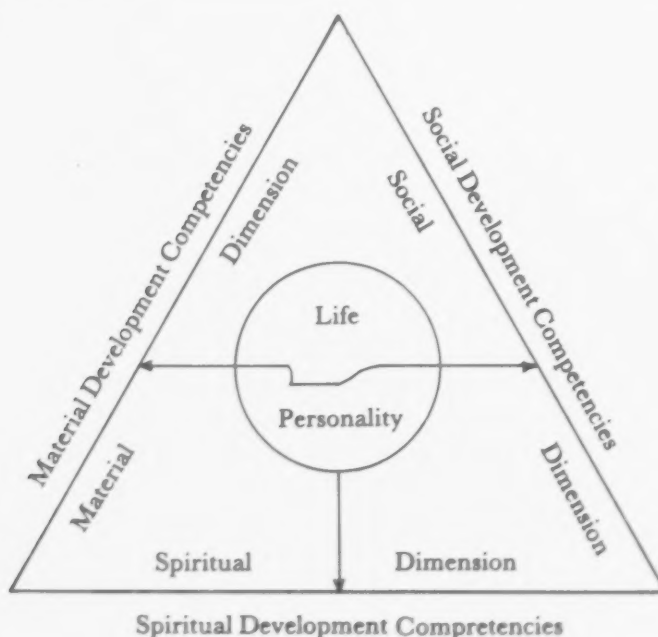


Figure 3. Balanced Teacher Competencies Derived from Three Basic Dimensions of Life.

What are the Material, Spiritual and Social Development Competencies in relations to the peaceful education?

These relations are shown in figure 4.

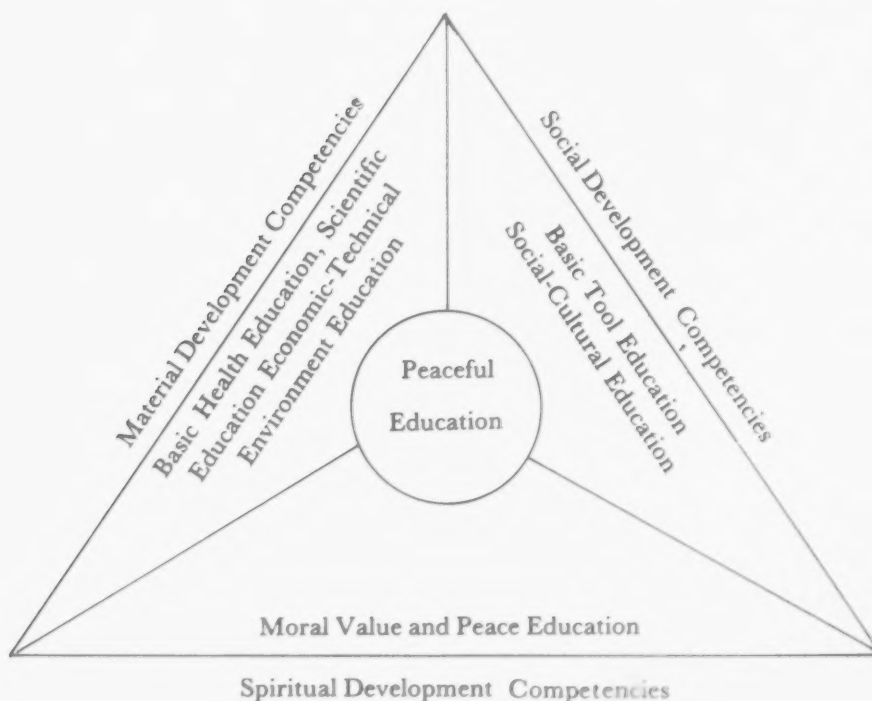


Figure 4. Relations of Balanced and Peaceful Teacher Competencies to Curriculum of Peaceful Education

Teachers who are equipped with Spiritual Development Competencies will be able to effectively inculcate Moral Value and Peace Education.

Teachers who are trained in Social Development Competencies will be able to effectively teach Basic Tool Education and Social Cultural Education.

Teachers who are trained in Material Development Competencies will be able to effectively deliver Basic Health Education, Scientific Education and Economic-Technical Environmental Education.

The Spiritual Development Competencies are partly composed of the following knowledge of, attitude to, and skills in:

- (1) moral value reasoning;
- (2) meditation;
- (3) precept behaviour;
- (4) humanitarian behaviour;
- (5) the inquiry method of peace (An-O-E-P-C Inquiry);
- (6) Character development;
- (7) measurement and evaluation of spiritual development.

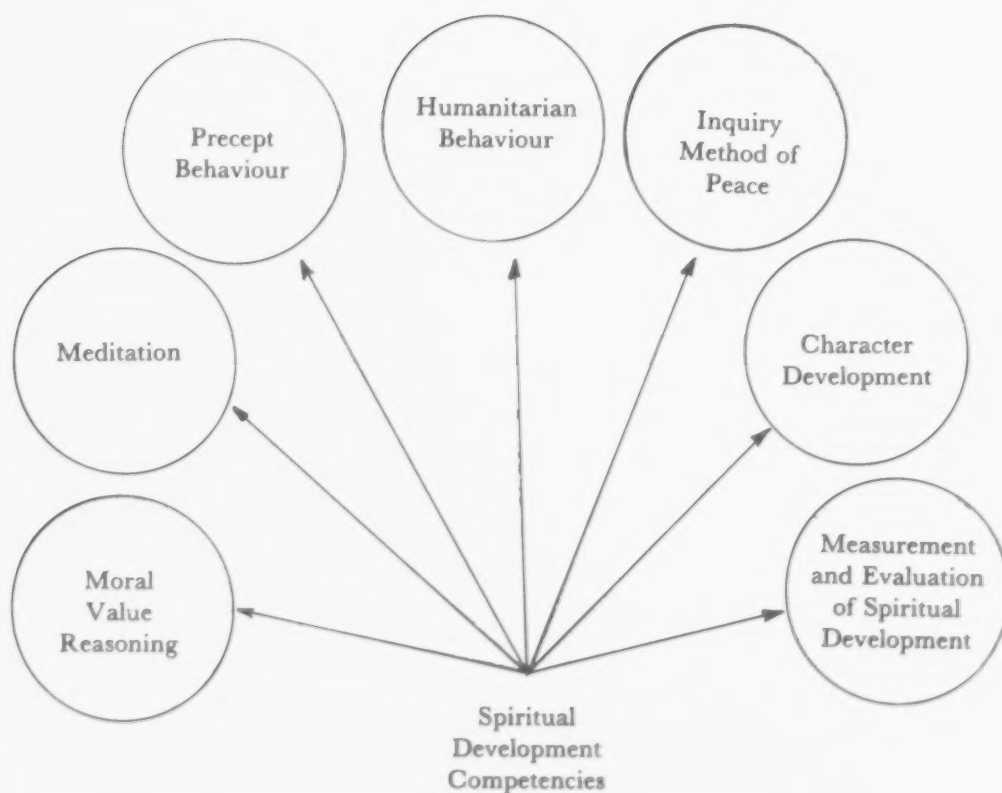


Figure 5. Seven Components of Spiritual Development Competencies.

The Spiritual Development Competencies will serve as pacifying factors for the humanization of Material and Social Education, rendering peaceful attitudes toward life, society, and the world community. The consequent civilization will be balanced between Mind and Matter.

The Social Development Competencies are partly composed of the following knowledge of, attitude to, and skills in:

- (1) role plays,
- (2) democratic leadership;
- (3) classroom management;
- (4) group dynamics,
- (5) communication, and questioning,
- (6) teaching of social studies,
- (7) measurement and evaluation of social development.

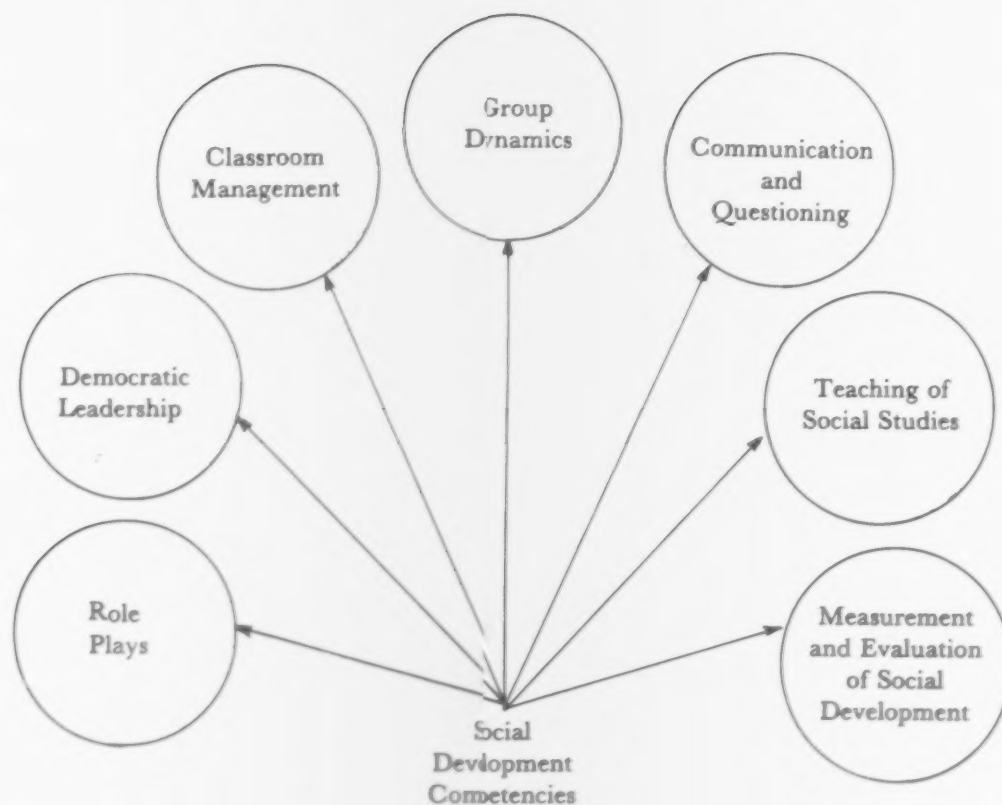


Figure 6. Seven Components of Social Development Competencies.

The Material Development Competencies are partly composed of the following knowledge of, attitude to, and skills in :-

- (1) basic health care;
- (2) science processes development;
- (3) personal management;
- (4) a basic vocation;
- (5) creativity development;
- (6) promotion of achievement motivation;
- (7) measurement and evaluation of material development.

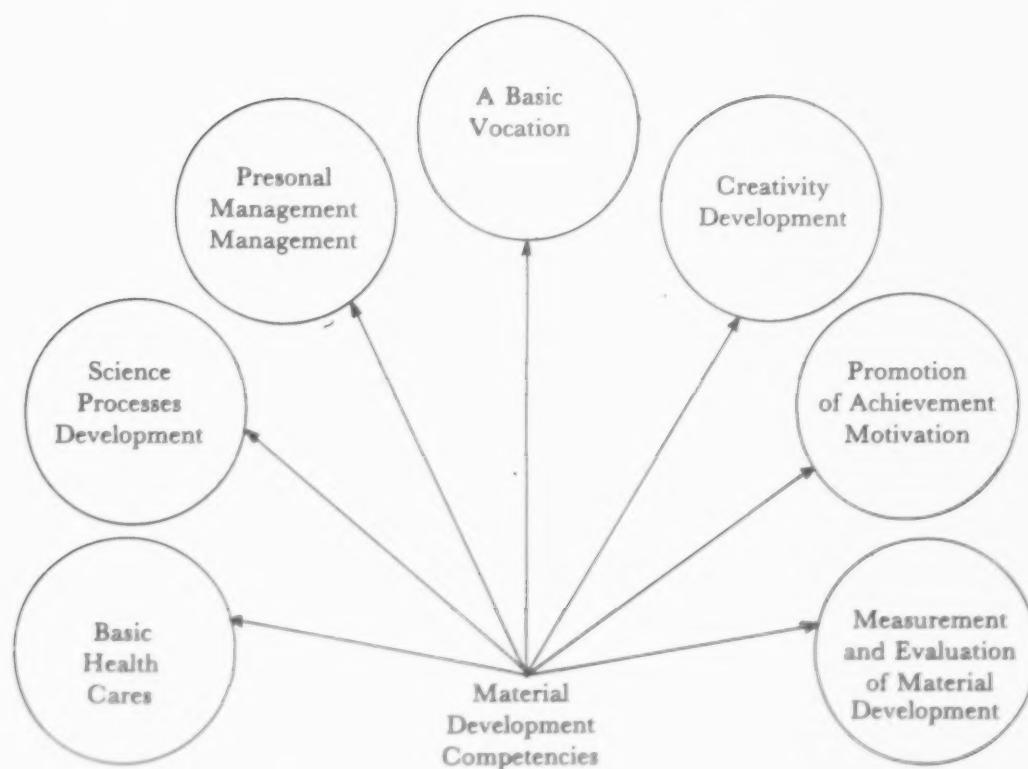


Figure 7. Seven Components of Material Development Competencies.

3. The Curriculum Components of Peaceful Teacher Education.

To be congruent with the philosophy and to achieve the goals of peaceful education, the curriculum of peaceful teacher education should have the following components.

- (1) General Education based on the wisdom of Religious Principles (such as Buddhism).
- (2) Professional Education.
- (3) Moral Value and Peace Education.
- (4) Basic Tool Education.
- (5) Basic Health Education.
- (6) Scientific Education.
- (7) Social-Cultural Education.
- (8) Economic-Technical-Environmental Education.

4. General Education Based on the Wisdom of Religious Principles.

The basic aim of general education is to promote a multidisciplinary foundation for students to acquire the knowledge and understanding of, and a positive attitude toward life,

society and the world as well as the ability to solve problems with a multidisciplinary approach.

The general education usually consists of the following areas:

- (1) Social Sciences;
- (2) Humanities;
- (3) Natural Sciences and Mathematics;
- (4) Languages.

Why does general education have to be based on the wisdom of religious principles in order to serve as a peaceful foundation?

The rationale behind the requirement is that secular education in general does not pay sufficient attention to the study and development of mind, even though it is the most important component of life, society and the universe. Since religions promote spiritual development, the religious principles are appropriate for serving as guidelines for peaceful general education.

5. Professional Education.

Professional education deals with courses which aim to develop the professional competencies of teachers. If teachers are designated to play important roles in rendering peaceful education, the traditional professional competencies for teachers will have requirements of peaceful education in the following manners.

- (1) The courses on philosophy of education will have to be modified in accordance with the philosophy of peaceful education;
- (2) The courses on curriculum development will have to be congruent with the philosophy of peaceful education;
- (3) The courses on educational psychology and methods of teaching will have to emphasize mastering of Spiritual, Social and Material Development Competencies;
- (4) The courses on educational measurement and evaluation will have to be geared to various aspects of peaceful education;
- (5) Professional ethics and moral values for teachers will have to be strongly emphasized.

6. The Curriculum Structure of Peaceful Teacher Education.

The Curriculum Structure consists of the following requirements

(1) General Education	30 credits
(2) Professional Education	40 credits
(3) Major Area	50 credits
(4) Supportive Area	20 credits
(5) Free Electives	10 credits
Total	150 credits

7. Exemplary Programs of Study

7.1 Major Area I: Early childhood Education

- | | |
|----------------------------------|------------|
| (1) General Education | 30 credits |
| (2) Professional Education | 40 credits |
| (3) Major Subjects | 50 credits |
| - Basic Tool Education | |
| - Basic Health Education | |

- Moral Value and Peace Education	
- Scientific Education	
- Social - Cultural Education	
(4) Supportive Subjects	20 credits
- Economic - Technical - Environmental Education	
- Art and Music Education	
- Child Psychology	
(5) Free Electives	10 credits
7.2 Major Area II: Elementary Education	
(1) General Education	30 credits
(2) Professional Education	40 credits
(3) Major Subjects	50 credits
- Basic Tool Education	
- Basic Health Education	
- Moral Value and Peace Education	
- Scientific Education	
- Social - Cultural Education	
- Economic - Technical - Environmental Education	
(4) Supportive Subjects	20 credits
- Psychology	
- Sociology	
(5) Free Electives	10 credits
7.3 Major Area III: Secondary Education	
(1) General Education	30 credits
(2) Professional Education	40 credits
(3) Major Subjects	50 credits
- Moral Value and Peace Education	
and	
- Scientific Education	
or	
- Social - Cultural Education	
or	
- Economic - Technical - Environmental Education,	
or	
- Basic Tool Education	
or	
- Basic Health Education	
(4) Supportive Subjects related to Major Subjects	20 credits
(5) Free Electives	10 credits

8. Education for Development.

Education and development go hand in hand. Development programs cannot be effectively implemented without involving in the educational processes. Educational programs, on the other hand, cannot be truly accomplished without involving in the development of human and community resources. This interdependent nature of education and development makes it mandatory for education to be systematically linked with urban and rural development.

In the developing countries, rural development needs to be urgently promoted to counter - balance the rapid pace of urban development. But development should not be at the expense of peace usually prevailing in rural communities. In order to maintain peace and to promote development at the same time, a peaceful approach to lifelong education for development is proposed.

A peaceful approach to education for development is based on the philosophy of balanced development between mind and matter.

Lifelong Education for Development: A Peaceful Approach to Open Teacher Education

1. A New Program at Ramkhamhaeng

At the Faculty of Education, Ramkhamhaeng University, we are developing programs for lifelong teacher education for development based on the peaceful approach model. Ramkhamhaeng University is an open University with student population of 600,000.

2. Scope of Lifelong Education.

Lifelong education begins in the womb and ends in the tomb. It embraces formal, non-formal and informal education. For a peaceful approach, the program of lifelong education will place an emphasis on Moral Value and Peace Education as a foundation for other aspects of education.

Teacher education in this context will provide integrated training programs for teachers of formal, non-formal and informal education.

3. Nature of the Programs.

There are two programs in the curriculum of lifelong teacher education.

- (1) A degree program leading to the Bachelor of Education.
- (2) A non-degree program offering courses for the certificate of education and providing courses for various groups of population.

4. Objectives of the Programs.

The programs of lifelong teacher education for development have the major goal of training teachers for peaceful lifelong education which serves as a basic force for development with the following objectives:

- (1) To train teachers for rendering peaceful education to parents, children, and youths who are out of schools.
- (2) To train teachers for rendering peaceful education to adults who are the major human resources for development.
- (3) To train teachers for rendering peaceful education for community development in both formal and non-formal contexts.
- (4) To train teachers for administering peaceful education for development.
- (5) To train teachers for rendering peaceful education for development through mass media.
- (6) To render peaceful educational services to the community and society.

5. Levels of Training Programs for Teachers of Lifelong Education.

There are four levels of training programs for teachers of peaceful lifelong education as shown in Figure 8.

6. Majors in Lifelong Education for Development.

There are five major areas in lifelong education for development as follows:

- (1) Major Area I: Education for Development of Peaceful Mind and Democratic Personality.

This Major Area is designed for training teachers who will provide education for children, youths and parents in the community. Teachers for day-care centres belong to this category.

- (2) Major Area II: Education for Development of Life and Work.

This major Area is designed for training teachers who will provide development education for adults of all vocations.

Teachers for farmer night schools and factory schools belong to this category.

- (3) Major Area III: Education for Development of Community.

This Major Area is designed for training teachers who will play dual roles of teachers and community development workers. In Thailand, these dual roles are urgently needed and they are now encouraged by the government.

Teachers in the community schools and community development centres belong to this category.

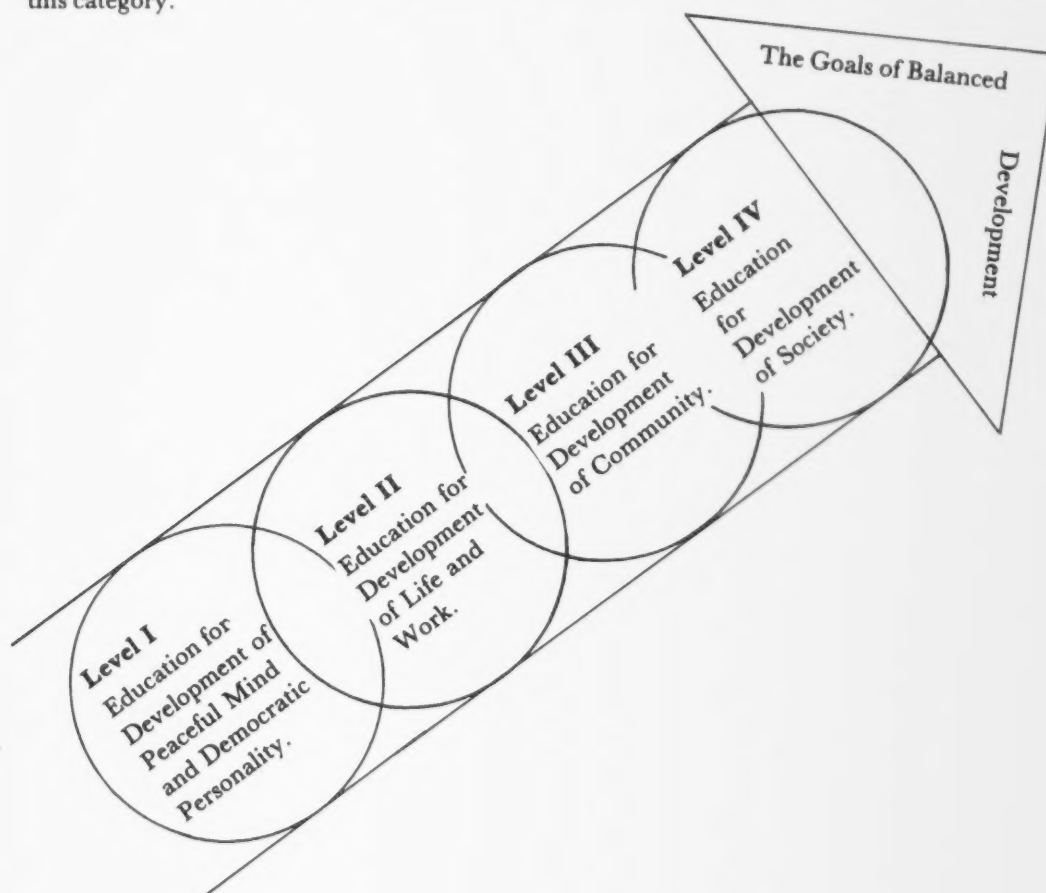


Figure 8 Four Levels of Training Programs for Teachers of Lifelong Education.

(4) Major Area IV: Education for Development of Society.

This Major Area is designed for training teachers who will mainly work as educational planners, administrators and organizers at regional and national centers of non-formal education.

(5) Major Area V: Education for Development of the Masses.

This Major Area is designed for training teachers and mass media workers to deliver lifelong education to the masses through mass media.

7. Samples of Courses in Each Major Area.

A programme of Lifelong Teacher Education for Development.

I. General Education 30 credits

- (1) Social Sciences: A Peaceful Approach
- (2) Natural Sciences
- (3) Humanities
- (4) Languages
- (5) Research and Statistics

II. Professional Education 30 credits

- (1) Philosophy of Education: A Peaceful Approach
- (2) Educational Psychology: A Peaceful Approach
- (3) Spiritual Development Teacher Competencies
- (4) Social Development Teacher Competencies
- (5) Material Development Teacher Competencies
- (6) Development of Instructional Media
- (7) Teacher Professional Ethics
- (8) Measurement and Evaluation of Lifelong Education.

III. Major Areas.**3.1 Major Area I: Education for Development of Peaceful**

Mind and Democratic Personality 60 credits

- (1) Basic Health Cares for Children
- (2) Promotion of Language Development in Children
- (3) Development of Number Concepts
- (4) Nature Study for Children
- (5) Development of Moral Character for Children
- (6) Home Economics
- (7) Socialization for Democratic Personality Development
- (8) Group Dynamics and Plays for Children
- (9) Meditation for Development of Health and Personality
- (10) Principles and Techniques of Early Childhood Education
- (11) Camping for young Leaders
- (12) Training for Development of Democratic Personality
- (13) Songs and Music for Children
- (14) Development of Creative Thinking Abilities
- (15) Development of Artistic Abilities
- (16) Development of Achievement Motivation
- (17) Development of Work Attitudes and Habits
- (18) Social-Cultural Education for Citizenship
- (19) Peaceful Ideology Education

- (20) Human Development
 - (21) Moral Value and Peace Education
- 3.2 Major Area II: Education for Development of Life and Career 60 credits
- (1) Development of Life and work Oriented Literacy Programmes for Adults
 - (2) Curriculum Development for Job-Creation and Self-Employment
 - (3) Nutrition and Health Education
 - (4) Moral Foundation of Life and Work
 - (5) Meditation for Development of Health and Personality
 - (6) Inquiry Method of Peace
 - (7) Business Education
 - (8) Culture and Personality for Life and Work
 - (9) Marriage Life and Family Planning
 - (10) Agro Industrial Education
 - (11) Consumers Education
 - (12) Development of Creative Work
 - (13) Human Relations for Development of Life and Work
 - (14) Development of Achievement Motivation
 - (15) Career Guidance
 - (16) Agricultural Education
 - (17) Life and Work Management
 - (18) Music and Art Education
 - (19) Moral Value and Peace Education
- 3.3 Major Area III: Education for Community Development 60 credits
- (1) Research and Development of Community Schools
 - (2) Community Development
 - (3) Research and Development of Appropriate Technology
 - (4) Integrated Rural Development
 - (5) Meditation for Community Development
 - (6) Village Boy Scouts for Community Development
 - (7) Social Ethics and Morality for Community Development
 - (8) Development of Community Sanitation
 - (9) Promotion of Folk Culture for Community Development
 - (10) Social Change and Community Development
 - (11) Co-operative Education for Rural Development
 - (12) Community Ideology Development
 - (13) Planning and Management of Community Development Projects
 - (14) Sports and Recreation for Community Development
 - (15) Group Problem-solving for Community Development
 - (16) Community Development Prefect Analysis and Evaluation
 - (17) Moral Value and Peace Education
- 3.4 Major Area IV: Education for Development of Society
- (1) Education for Development of Peaceful National Ideology
 - (2) Development of Moral Foundation for National Security, Peace and Prosperity
 - (3) Lifelong Education for Development of Life, Society and Natural Resources

- (4) Research and Development of Social Values for Peaceful Social Transformation
- (5) Development of Democratic Culture and Personality
- (6) Comparative Development Education
- (7) Thai Art and Culture Study
- (8) Meditation for the Development of National Peace
- (9) Technology for Economic and Social Development
- (10) Survey of Public Opinions
- (11) Thai Politics and Government
- (12) National Physical and Mental Health
- (13) Systems Analysis in Lifelong Education
- (14) Peaceful Education: A Buddhist Approach
- (15) Moral Value and Peace Education

3.5 Major Area V: Education for Development of the Masses

- (1) Lifelong Education for the Masses
- (2) Meditation for the Masses
- (3) Citizenship Education
- (4) Consumers Education
- (5) Laws for the Masses
- (6) Mass Communication for Cultural Transmission
- (7) Democratic Education for the Masses
- (8) Health Education for the Masses
- (9) Child Rearing Practices: A Peaceful Approach
- (10) Home Technology
- (11) Home Industry
- (12) Co-operative Education
- (13) Social-Cultural Education
- (14) Economic Education
- (15) Psychology for Everyday Life
- (16) International Education
- (17) Moral Value and Peace Education

References

- Buasri, Saroj et.al **Education: A Buddhist Approach**. Bangkok: A Technical Report Submitted to The National Commission for Culture, 1983.
- Deutsch, K.W. **The Analysis of International Relation**. New Jersey: Prentice-Hall, Inc., 1978.
- Haas, E.B. et.al. **Dynamics of International Relations**. Connecticut: Greenwood Press, 1975.
- Kelman, H.C. **International Behaviour**. New York: Holt, Rinehart and Winston, 1966.
- Phra Rajavaramuni (Prayudh): **A Dictionary of Buddhism**. Bangkok: Karnsasna Press, 1977.
- Poonyanupaap, Sucheep: **Tripitaka for General People**. Bangkok: Bangkok Press, 1980.
- Washington World Conference. **World Peace through Law**. St. Paul Minnesota: West Publishing Co., 1976.
- Wichiarajote, Weerayudh: **A Psychology of War and Peace**. A Mimeographed Report, 1971.

DISTANCE EDUCATION : CONCEPT, PHILOSOPHY AND APPROACH*

Anything that can be learnt from books and from a teacher in the class room can also be learnt from correspondence. Correspondence as a viable instrument of instruction is being gradually realised, recognised and also accepted. The Committee on Correspondence Courses and Evening Colleges appointed in 1961 by the Ministry of Education in its report says, 'Indeed, the opinion is held that under the correspondence method it is possible for persons with concentration and discipline to become better instructed and educated graduates than those at present produced from some affiliated colleges'. The evidence in favour of correspondence instruction is summed up in an article in the *Encyclopedia of Educational Research*. It says that 'with reference to correspondence work, the research shows that the marks in homestudy courses are generally higher than in similar courses in residence; the difference between the performance in residence classes of students who had only previously earned credits in home study and those who had only residence work was in favour of the home study group'.

Concept and Approaches

Different concepts and approaches to the study of the problems of distance education have been developed in both the developed and developing countries. In Indonesia a Directorate of Community within the working sphere of Ministry of Education Culture organises mass education for Indonesian citizens. There were as many as 10266 people's Libraries set up in Indonesia for the dissemination of knowledge to the mass. Such efforts have also been made by the small countries like Ceylon. Adult literacy, functional literacy and community development are integrated in the rural development programme sponsored by the Government. It is fascinating to note that even the political parties in Ceylon organise their adult education services and trade unions for their study circles.

The largest Dutch College, *Leidsche Onderwijsinstellingen* of Leiden, which provides both technical and non-technical courses at all levels includes facilities for oral tuitions at one-day sessions on Saturdays for almost all its courses.

Another large Dutch correspondence college *Nederlands Schriftelijk Studiecentrum* (N.S.C.C.) offers a wide range of non-technical, vocational and general education courses, is housed in a Church and the directorial staff are members of the priesthood. In West Germany there is a considerable diversity of practice. The largest college H.F.L. (Hamburg), theorises that correspondence is an 'autonomous' form of education and that if oral tuition is used to supplement it, 'a foreign element' is brought into the method.

Most of the Institutes including ours in the University of Rajasthan combine variety of techniques to make the system more viable and effective e.g. The Institute of Correspondence Studies, University of Rajasthan, Jaipur, not only sends reading material to the students but also organises week-end classes at places where the concentration of students is larger, evaluates students response sheets, and organises personal contact programmes. Library facilities have also been provided where there is larger concentration of students.

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Educational Technology

We have seen during the past decades the emergence of a hybridization of such diverse fields as electronics and electrical engineering, information, communication, organisation and cybernetic theory, broadcasting (radio and television) psychology, teaching and curriculum theory, which may be in the form of educational technology. Now modern technology includes Inset 1B satellite and computer aided teaching facilities.

Whereas an educationist is mainly concerned with the optimization of human life through the objective and subjective organisations of learning, a technologist is primarily concerned with the setting of viable system for the attainment of specified goals. The technologist therefore is one who conceives and develops technological systems and termed as such an education, the engineer, the system analyst, the communication consultant, the computer specialist, and instruction designer, class room teacher and all such persons are technologists.

Technology for distance education, if viewed comprehensively may also include media offering mass distribution of messages such as newspapers, magazines and periodicals, radio or television, public learning centres, like galleries, theatres, libraries, museum, psychotherapy, Yoga etc. and personal learning resources, such as audiovisual recording, play-back stored devices etc. It may be calculated that there exist enormous opportunities for developing the non-formal education system, which is much less expensive and much more rewarding, academically and numerically. A thoughtful scrutiny of our consideration of the problems and prospectus of distance education would unmistakably lead us to the conviction that there exists a strong need for new forms of educational technology to be widely dispersed. In case it is done we would come across persons with high intellectual aptitude and commitment to work for the cause which in itself is both a mission and a profession. It is high time that educational technology is liberated from its primitive basement and geared-up for wider cause based on scientific lines.

Need for Changing the Elitist Concept

One of the legacies that we in most part of the Third World inherited is the present system of education which has not yet developed indigeneous roots. The Colonial system aimed to train and educate the privileged microscopic minority belonging to the upper strata of society. In sum, the alien Government were alien to the aspirations and urges of the teeming millions. The traditional system has outlived its utility and is thoroughly unsuited to the present times. Distance education is a direct outcome of the social urge for education. Opening of the avenues of learning to the common man belonging to all age groups and irrespective of geographical, cultural and economic barriers would change the whole complexion of the society. Common man's access to higher knowledge, science and technology would constitute a concrete step in the process of democratisation and with this would go the elitist concept of education under transformation.

Institutions of distance education should not be treated as mere appendages of traditional Universities. It is high time that they are given more and more structural, academic and financial autonomy. There is need to create a Faculty of Distance education in the Universities with representatives of the Directorates and related departments. This Faculty should be entrusted with the management of the functioning, expansion and development of distance education. The Directorates of distance education should enjoy the autonomous status of a multi-disciplinary department. Distance Education has great potential for growth and should be given academic freedom and adequate financial support. Money spent on distance education is an investment which will contribute substantially to the process of nation-building and social change.

OPEN HIGHER EDUCATION: FROM OPEN ADMISSIONS TO OPEN-MINDED PERSON*

In this short article, the author will present the philosophy and concept of open higher education. The purpose is to give the information about the development of open higher education with an emphasis on the concept rather than the details, to present the topics for discussions rather than the final conclusions. It is, therefore, inevitable to mention some examples in Thailand as the tangibles.

Open Admissions: the Basic Concept of Open Higher Education

One of the primary and basic concepts of open higher education at a university level is to admit more students and to give people of various financial and professional status more opportunity to enter an open access of higher education. Two concepts will be discussed: from aristocracy to meritocracy, from meritocracy to democracy.

1. From Aristocracy to Meritocracy. The primary feature of the expanding admission or the opportunity for students of various groups to study at a university level is to give a chance to whoever has the ability, readiness and interest in pursuing studies at such a high level. Meritocracy has replaced the former system aristocracy, which selected only the students from some particular groups of aristocrats who had special roles and status. One obvious example from Thai higher education is the case of Chulalongkorn University. Formerly, students were selected exclusively from those who had higher status and more important roles but later on offsprings of various status were included. The entrance examination which took place in 1930¹ is considered as the critical shift from aristocracy to meritocratic practice.

In the earlier days before Chulalongkorn University adopted open higher education for people in general, especially when it was just established as the institution for the training of the government officials, it was stated in the principles for admission that only "those who hold titles by birth"² would be selected. The additional selection could be made provided that there were some vacancies or necessities.

In the old days higher education was highly prestigious, as a result, it was spread and employed among aristocrats only. Later, when high-level manpower demands increased, higher education consequently was expanded in order to obtain more people for increasing works. In addition, new science and technology required more specialists. The selection of the university students were thus shifted to meritocratic criteria for admissions.

2. From Meritocracy to Democracy. Even though more opportunities for higher education existed as mentioned in the first item, a lot of people still lacked the chance monopolized by the minority elites owing to the principles and regulations which limited the

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¹Paitoon Sinlarat, "The Development of Universities in Thailand", thesis for the Master Degree in Educational Administration, Chulalongkorn University, 1973, p. 37. (in Thai)

²History of Chulalongkorn University 1916-1966, 1967, p. 4. (in Thai)

admission. Consequently, there was an enthusiastic attempt to extend higher education to different groups of people, not enjoying the privileges before. That was the beginning of the concept of Democratization and Mass Education in higher education which is identified as a form of open access. In Thailand open access started in 1933 when University of Moral and Political Science was established. This institution, which was later called Thammasat University, admitted its students without any entrance examinations.¹ Thus, it can be considered as the first open university in Asia. However, this practice was unfortunately altered into a closed system since 1949.

When there was a worldwide interest in open higher education resulting from the founding of British Open University in 1969,¹ in Thailand an open university was established in 1971 as an emulation of Thammasat University in its earlier days. This is Ramkhamhaeng University which can solve the problem of admission as its admission capacity is 100,000 students a year without any entrance examination. This concept was also adopted by Sukhothai Thammathirat University.

Higher education was changed into the concept of Democracy which led to the concept of Open Admissions. This change was brought about by many factors one of which was political cause: Democracy was to be promoted and open access is conceived as a part of such movement. Nevertheless, new economic and social demands were also important determiners.

Open Education: the Development of Educational Process

The Another principal concept of open higher education is open education which is the educational process leading to a wider and more profound area of knowledge and sciences without limiting itself to only teachers and narrow square classrooms. The development of educational process is arranged in accordance with the open admissions. Simultaneously, it is an effect of the development of educational technologies. This concept will be discussed in three aspects: from teacher to textbook, from textbook to selected media and from media to distance education.

1. From Teacher to Textbook. The first feature of open education is that knowledge is not acquired only through teachers but also through textbooks. This concept can be obviously seen in the history of higher education. Teachers were the ones who had the authority in determining the area of content and supervised every activity in the learning-teaching process. Teachers were hence the sole source of knowledge. When open education became widespread, students were not required to attend classes. Early Thammasat University is a good example, there were more requirements for textbooks and other written materials. Furthermore, printing was at its early development then. As a result, educational process was expanded. It is sufficient for students to study textbooks by themselves. At present textbooks have become a main aid at this level.

Textbooks for open education can be classified into several forms. The textbooks of early Thammasat University tended to be lectures; they represented teachers, and could be regarded as teachers. When students read textbooks, they understood them in the same way as they understood their teachers. The content was the conclusions and notes of the lectures

¹See Boonyen Wawthong, *University of Moral and Political Science: Origin and Relationship to Democracy* (Bangkok: National Institute of Development Administration, 1969). (in Thai)

²See Norman MacKenzie, Richmond Postgate and John Scupham, *Open Learning* (Paris: The Unesco Press, 1975).

including main points to remember. Ramkhamhaeng University's textbooks were similar to textbooks of closed universities in general. Textbooks of Sukhothai Thammathirat University tended to aim at self-study. Each form of textbooks reflects the philosophy of each respective institution. Before any textbook or material for open education is written, its philosophy should be clearly stated.

2. From Textbook to Selected Media. The word media here means the additional aids, apart from textbooks, including transparencies, tape recorder, slide tape, radio, mail, and/or television. Many universities have extensively used more media as teaching aids. This is the real beginning of the concept of open learning. This concept is practical and has already adopted by many institutions in several countries. For instance, the People's Republic of China founded Chinese Central Broadcasting and Television University.² Australia, Kenya Poland and the Union of Soviet Socialist Republics³ have used several media in order to educate their people at a higher and more extensive levels. These attempts are in accordance with one definition of Open Learning System given by the National Association of Educational Broadcasters - "to provide the flexibility required to satisfy a variety of individual needs, the system should make it operationally possible to employ sound, television, film and print as options for mediating learning experience."⁴

The philosophy and concept of open education which concentrate in selected media has been widely operated in both closed system universities and open system universities; the purpose of which is to distribute knowledge to groups of people who generally do not enjoy such an opportunity or to groups of people who have already had that opportunities, but still need to gain more knowledge in order to cope up with the educational development and the new basic social changes.

3. From Selected Media to Distance Education. The current open education is Distance education which attempts to employ every form of media to be utilized systematically. These forms of media are related to each other; furthermore, they support each other so as to help the students gain most knowledge no matter what the distance may be. Distance education requires readiness, good preparation, and cooperation among those concerned which are likely to be institution for open education. One example of these is Sukhothai Thammathirat University which admits students from different parts of the country.

The operation of distance education by means of every form of media in order to provide the students in various localities and precincts with systematic education can be regarded as the most perfect step to open education at a university level. This trend has expanded education in a more extensive and just manner. It creates equality and democracy in the area of education, and will certainly lead to a genuine learning society.

Open-Minded Person : the Final Target of Open Education

As mentioned earlier, general higher education in any country has a common tendency to serve only the elite group. Consequently, the graduates' evaluation, beliefs and habits tend to be like those of their own elite group. Whatever they do usually follows the patterns of their education. Their unintentional target is to change man and society in the way that they might wish. They will be considerably dissatisfied if man and society do not

²John Hill, *Asian Open University*. (Mimeographed), p. 3.

³See Mackenzia and others. *Ibid.*, Chapter of the Open Learning in each country.

⁴Cited by MacKenzie and others, p. 16.

change in the way that they consider proper. Their concept and thought are naturally narrow like the way they were educated. In Thailand examples of this can be seen clearly. The early and even the current graduates still maintain a basic attitude of government officials that they are decent, competent and right since early universities were founded to serve the government.

Later technology, knowledge, vocations and professions have been extended. Higher education, originating in Europe and the United States of America respectively, caused professionalism. Each graduate has his own way of solving problems, and believes that his solution is the best of all even though he should have been more broad-minded.

The state of being narrow-minded and the concentration on only one's own group affects international affairs; each country seeks only its own benefits and exploits others while maintaining the belief that it is the best greatest country which nothing improper was ever executed. Such a concept has always caused problems for all mankind.

Higher education throughout the world and in Thailand is not excluded from that system. However, it has been greatly developed from the closed admissions of the elite group to the open admissions of people in general until there are open universities in almost every part of the world. The learning-teaching process has been continuously developed by reducing the teachers' authority and management. Students have been provided with educational sources and distance education. To what extent are those who gained knowledge through the open system open minded? How ready are they to listen to others' opinions? How much do they try to accept the attitudes which are different from their own? How much prejudice can they eliminate? How further away have they moved from egoism to altruism.

It is a pity to say that our open educational system is still far from the ideal. No matter how many open universities there are in each country, we still face the problem that the people in the same country do not listen to different ideas or opinions. People of different countries are not open-minded either. Thus, the development of higher education is merely what Sir Walter Moberly has cited from historian's words to criticize universities in his book. **The Crisis in the University** since 1949 that "Universities were not to make men perfect but to make imperfect human beings comfortable."¹

The real philosophy and concept of open higher education does not necessarily mean only more admissions and more open education, but it basically means that people who have attained higher education should be taught how to really become open-minded.

Has our open higher education followed this direction?

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¹ Sir Walter Moberly, **The Crisis in the University** (London: SCM Press, 1949), p. 44.

PLENARY SESSION II:
Development Trends
In International Perspectives

Main Paper

OPEN HIGHER EDUCATION: DEVELOPMENT TRENDS - AN INTERNATIONAL PERSPECTIVE*

Before addressing the topic I have been asked to speak on - international perspectives on open university education - it is necessary first to establish some ground rules on what I mean by 'open'. An open institution is not just a university without walls. There are literally hundreds of institutions located on all continents offering university education by means of correspondence. Certainly distance is a component of an open university, but it is not an essential component and most of the distance institutions are not open. Nor need openness have anything to do with the use of modern communication technologies, though these can be very useful components. Again, it is not necessarily a modern concept since there were strong elements of openness to be found in Scottish universities over a hundred and fifty years ago. A Royal Commission in 1830 reported that Scottish universities,

have always embraced students of every variety and description. All persons may attend any of the classes in whatever order or manner may suit their different views and prospects¹.

A few years later, in England in the 1870's, the University Extension Movement in Oxford and Cambridge practised another form of openness with unrestricted entry to courses, unrestricted time, no insistence on examination or certification, but provision for travelling professors who toured the country, meeting groups of students wherever they might gather together.²

We seem to have lost sight of this kind of openness this century, with our emphasis on certification - the granting of degrees as the criterion of success - though, with the creation of several open universities over the past two decades, there seems to be some renewed emphasis on openness.

When I am looking for what I regard as the essence of openness in the present age, I take as a starting point the coining by Henri Dieuzeide some thirty-four years ago of the phrase "Copernican Revolution". By this he was referring to a major educational shift from a teacher-centred to a learner-centred approach - what another writer³ has described as "a transfer of the centre of gravity of educational thinking and research from the functions and activities of teachers... to the behaviour of learners". To me this is the crux of open education - learners are in control of their own learning. Thus, a completely open university would be where (a) all who wish to enter are accepted, (b) such persons could study where they wished and when they wished without suffering disadvantage (i.e. teaching and academic resources and services would be freely available whenever and wherever required), (c) similarly, there would be no time constraint or period of enrolment; students would be free to present themselves for assessment and examination at times determined by them, (d) there would be

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no restriction on choice of courses, (e) there would be no economic impediment to their study, such as high postage costs or insufficient money to purchase technological aids such as a telephone or TV screen.

One can well ask if a truly open university needs institutionalising. For the person who wants to study alone at his own pace in areas of concern to him/her, such a person is free to do so without the need for institutional support. Access to books and to libraries is relatively easy to obtain and we have to admit that there are in all of our communities many well educated and wise men and women who have never been to a university, open or otherwise; many, in fact, who have not even been to a secondary school. For such people the only advantage of institutional affiliation is the awarding of a degree or diploma.

Yet there is need for society's intervention. Society needs more well educated people. Government has to provide structures and support for such education. Open education means much more than a person completing an admission form, paying a fee and becoming a statistic. It must mean the provision of services which relate not only to access but also to processes such as teaching, tutorial, counselling and support services to ensure that students have reasonable opportunities for successful completion of their study. Open education will not be a success if it leads to the creation of a large pool of disappointed and disillusioned persons who have failed in what was for all of them the commencement of a voyage of discovery, a voyage of hope and of high expectation. So open education must be the outcome of deliberate planning, deliberate provision of financial and organisational services which permit great access but also give reasonable expectations of success.

There are, of course, no truly open universities. Governments fund institutions, permitting varying degrees of openness, which is determined by a concern over the balance between access and hopes of success that I have just referred to. When we look at the international scene, in the first place it has to be said - and I am not here to flatter my hosts - that Thailand, with its open universities of Sukhothaiyathammathirat and Ramkhamhaeng, has moved more positively and firmly on a course of open higher education than any other country. The planning, the use of technology, the level of openness surpass that of any other nation, and the two universities provide a model worthy of study by other countries. The sheer size of the Thai operation is daunting and the opportunity for the 'farangs', the visitors, to see both open universities during the course of this conference is something we appreciate.

What then is happening to open education in the world at the present time? I cannot claim full knowledge, possibly not even an adequate knowledge of the total field but I am hoping to generate debate on issues rather than to hand out detailed information of doubtful worth.

In my own country there is debate but no action. Every politician claims that there is a great need for open education and that we must set up open education institutions, but it is significant that these politicians speak when they are in opposition, never when they are in government. Governments, for that matter, in my country, have spoken for years - more years than I can remember - about equal opportunity and free access to higher education. It is unfortunately part of the rhetoric of politicians in the Western world. For a lot of reasons no government, whatever its political colour, will embark on a policy of free open higher education. I shall refer to the reasons for this later. The most that governments are prepared to do in Australia is to continue to finance distance higher education. Even here there has been no expansion in recent years; if anything there has been a slight reduction. The distance education that is offered largely follows the timeframe of full-time study, i.e. the distance student is tied into the timetabling of the full-time student, studying the same courses in the same degree structures, the major concession being an extended time line. Australia

has not been very venturesome. Most reliance is placed on the printed word and there have been only minor excursions into the technological world. Cassettes, both audio and video, are used and occasionally teleconferencing, but Australia will be launching its first communication satellite next year, with provision of education channels. At the time of writing no Australian higher education institutions have sought time on that satellite even though I believe governments would be sympathetic to a request and though Australia's vast distances invite the use of that kind of technology.

Our near neighbours in South East Asia are more concerned with open education and are more aware of the technological support services available. To Australia's north, Indonesia last year decided to establish an open university in Jakarta. This is to meet the needs of students qualified for entry to the established universities but who are unable to find places in those universities. Thus, it is not an extension of higher education to different social groups but rather provision of opportunity for some 25,000 lesser qualified university candidates to gain places.⁴ Satellite technology is to be used as part of the program for distance students as well as providing for the needs of students in the established universities in various regions such as the Eastern Region of the Indonesian archipelago. This university has yet to open its doors.

Thailand, of course, is well known to you and in the course of this conference I am sure all of us will increase our appreciation of what is done in its two open universities. From what I have seen in the course of several visits to the country, Thailand owes much to a few dedicated senior educators who, through their persistence, have brought the two open universities into being. As I indicated earlier, along with those of Sri Lanka, they are the most open of the existing open universities in the world.

Sri Lanka, by its Act 16 of 1978, established its first Open University in Colombo and this opened its doors in 1979. Though modelled on the British Open University, it has developed new and important directions, the most important of which is its excursion into retraining education and distance education. In addition to offering traditional degree programs by means of distance education and through regional centres, a large measure of control of distance education in the country has been handed over by the Ministry of Education to the Open University. Additionally many specialist, non-credit programs of community value are provided as, for example, distance courses in irrigation techniques. At the final stage, the hope of the university is to place less emphasis on social science and humanities based subjects - most popular in open and distance institutions - and to develop courses with a science or professional basis. This I regard as a very necessary step if we are to talk of true openness. In Sri Lanka access is restricted to about 50,000 with a very low level of fees. This does mean that in formal education, as in Indonesia, the matter is not of extending access opportunities so much as accommodating some of the large numbers of qualified applicants unable to get a place in the established universities.

It is not proposed in this presentation to go from country to country describing their attitudes and policies to open higher education. Rather, I will select a few which will serve to illustrate different approaches. Many countries, probably most, have given consideration to the idea, if only as a relatively inexpensive solution to the political problem of meeting increasing demands from younger people for university places. This is very true in developing countries. It is not quite so true of developed countries where, because of a shortfall of students from their own countries, there is a vigorous campaign of recruitment of overseas students, with South East Asia being the recruiting ground for academic salesmen from a host of Western universities. Among Western nations I am not aware of any dramatic new developments in open education. There are minor changes and innovations in the use of

technology and organisation which might constitute a great leap forward for some institutions but which have derived from or are an extension of earlier practices. Thus, the Open University in the UK, along with some traditional universities and polytechnics, is moving into what the Times Higher Educational Supplement calls "cafeteria's higher degrees".⁵ While still operating within the formal degree structure, certain older students will be allowed to cross-credit courses from one institution to another. This does widen the choice of courses available to these selected students. The idea of the freedom of the student to collect credits from different institutions is, of course, an established central European practice.

Another attempt to create more openness is that of Eric Robinson and his group at the North East London Polytechnic to turn the Polytechnic into a community university by introducing an individualized problem orientation to learning. As Teather⁶ has described it, the aim is to cater for the needs of prospective students rather than to seek students to fit the courses that the Polytechnic would like to run.

Of the four self-styled open universities in western Europe - the British Open University, Fern University in Western Germany, the Spanish Universidad Nacional de Educacion a Distancia and the Netherlands Open University - the Netherlands University offers the most promise in terms of our definition of openness. The other three are established and as they are producing a considerable number of graduates - over 50,000 in the UK and over 1,000 in the Spanish Open, there is some reassessment of functions, extensions of services and continued attention to course design rather than into any overall reappraisal of the system. The Netherlands Open University, which was scheduled to open its doors last September is striving to be truly open. As originally planned, every applicant over the age of eighteen would be admitted irrespective of educational qualifications and attainments. There will be no predetermined programs of study, the student being the one to determine the combination of courses which he sees as the most suited to the degree or diploma he seeks.

One needs to turn to Western Canada to see interesting uses of technology as a means of achieving open education. An interesting experiment, currently more in the continuing and non-formal education area, is that being conducted by a Victoria B.C. organization known as "Knowledge Network of the West". This organization is using satellite technology to beam TV programs for up to eighteen hours a day to all parts of the sparsely populated province of British Columbia. Television programs, not developed by the Network but bought or borrowed from other sources, provide for both the educational and entertainment needs of all age groups and all levels of intellectual and educational development. The next step, now being planned, is for the universities of Victoria and Vancouver to get together to map out their resources and to pool these as a means of providing university level TV programs for the Province. A combination of private enterprise and the government of Alberta in Canada has recently launched "Access Educational Services" utilizing satellite technology - twelve hours a day, seven days a week, TV services - along with eighteen hours a day of radio services. So far Access is concerned with schools education and non-formal education but I refer to it because I see important implications which I shall elaborate on later. These relate to the great use of non-print materials as the basis of instruction. The system is also hoping to develop audio interaction between teacher and learner and for interactive computer services within the next two years.

These two Canadian projects are significant in two important ways. In the first place, with their programming providing daily services for everyone from preschool, through formal schooling and higher education to non-formal and continuing or lifelong education, as well as entertainment programs, they are developing a new kind of openness in that they blur

or play down the distinctions between one sector of education and another. They also break down the barriers between what is education and what is information service or entertainment. Anything which helps remove from the popular mind the idea that education is an isolated unpleasant segment of our lives through which we must pass before entering the real world, must be welcomed by all present in this room.

The Albertan interest in interactive learning by means of computer represents another advance in that other area of interest to us, what has been termed the "Information Revolution". Already we see educational applications of great importance. Currently in my university in Australia, I can, in a matter of minutes for the outlay of \$8 - \$10, tap the whole of the library resources of North America on what has been published in the Social Sciences. This information is available to anyone with a telephone and a satellite link with North America. It has profound implications for learning. It changes, for example, the whole business of thesis writing. More importantly it makes possible what I referred to in my opening remarks - the transference of the centre of gravity of educational thinking and research from the teacher to the learner. The technology is available to teacher and learner alike. It needs no particular mystique such as teachers once possessed. In fact, the young learner with his familiarity with computer games, is likely to utilize the new technology in a more matter-of-fact way than his older teacher who is still somewhat apprehensive of this new technology.

The Plato computer interactive system is readily available to Australian students and is also probably available to many of you from other countries. This is essentially a huge, computerized programmed learning system, operated from eastern United States and accessible by means of satellite and landline services. It has many elements of openness about it since it offers a considerable range of programs into which a learner can tap at any level he wishes and, as the interaction is between computer and learner, the process of using the services is very much under the control of the learner. Cost, of course, is a major factor and this is true of all data banks and information systems. Their preparation must be labour intensive and the labour involved must be highly qualified and well paid.

I have ranged over some of the more significant developments in Asia, Northern America and Western Europe for these are the areas I know best. I know little of South America though Colombia and other countries in that region have been concerned with mass education and have been using satellite technology to provide extensive services to schools. I know even less about what happens in the Socialist World. I understand that much use is made of correspondence education. This is usually interspersed with periods of fulltime study. Thus, one East German professor⁷ writing on the subject indicated that a quarter of the 1.5 million university and technical college students in his country attain their qualifications by means of distance education. Twenty of the fifty-four universities offer some 130 subjects, ranging over the natural, social, physical and technical sciences. Persons studying in the social sciences receive six weeks a year on salary to attend university for fulltime study; those in the sciences eight weeks a year. All get three months leave from employment - again on salary - to write their final diploma papers and thesis. There is not much in the way of openness in that everything is located in one centralized authority, responsible for the whole of the nation's distance education. This determines the direction of the education processes, formulates the teaching directives and study instructions, as well as the coordination of the preparation and dissemination of all printed teaching materials. The system does, however, make a point of significance to us. Our governments cry out for more training in the sciences and the technological areas, yet our open universities have hardly given any consideration to teaching in these areas. There are very good reasons for their reluctance.

Does the East German system of periods of fully paid leave to permit periods of fulltime study show us a way of achieving these objectives? Such an innovation would create more openness in that it gives access to new areas of study; it does address concerns of governments. The real question is, who pays? How many governments are serious enough about open education to address the issue of how to produce good scientists and technologists by means of mass open education?

While preparing this paper, I did a considerable amount of reading and from this four major points emerge. The first is that, particularly in the developing world, there is a very large number of potential students for open universities. Point 2 is that governments in most countries of the world express a desire to develop and extend open education. The third is that the technology we already have is readily adaptable to and available for use in open education. So far so good, but my fourth point is that, in spite of points 1 to 3, advances in open education are piecemeal and usually lacking in sound philosophical and educational bases. There are, indeed, many areas of resistance to it, some arising from real and legitimate concerns about its aims, purposes and processes. A question to be asked is, will open education be a form of education in its own right or will it be a fringe form of ordinary education?

In the time remaining to me I will elaborate on some of these issues under the headings "the nature of higher education", "questions of access", "problems relating to delivery of appropriate higher education services".

One of the major debates which have great bearing on openness in higher education is that of the purposes of our universities and colleges. The two major viewpoints both have right on their side and both have examples of universities practising them. This debate ranges around the argument as to whether higher education is concerned with the acquisition and utilization of knowledge, or whether it is on the other hand concerned with developing the attitudes, behaviour, conceptual and perceptual capabilities of persons. What do we want from our graduates? Persons immediately useful because they have a body of knowledge or a range of skills that fits that person immediately for the labour market - a person who can go out and build bridges or write computer programs on the day he graduates? This is very much the underlying philosophy of most open universities. They conform with what Otto Peters, Director of Fern University, has referred to as the industrial model. He likens open education systems to industrial enterprises. Criteria suggested by him are:

...division of labour (on the side of the teachers); mechanisation; automation; application of organisational principles; scientific control; objectivity of teaching behaviour; mass production; concentration and centralisation.

He characterises the relationship between teacher and student as:

...being controlled by technological rules (and not social norms as in face-to-face teaching), maintained by emotion-free language (and not interactional speech), based on a limited possibility of analysing students' needs and giving them directions (not on expectations built on personal contact) and achieving its goal by efficiency (and not through personal interaction).

This philosophy is directly opposed to that held in the traditional universities. The other view of higher education sees the ability to think, rather than the ability to know, as the real goal. In simplified form the arguments amount to a differentiation between knowledge and learning. The traditional approach sees the task of universities and colleges as developing the whole being - a person able to conceptualize, to move from overriding theoretical concepts to specific tasks, to set his behaviour within a value framework which he has worked out for himself. Emphasis is on the adaptive, flexible, innovative mind, able to anticipate and adapt to novel situations.

As an example, in my country there is an average of one member of academic staff for every fourteen students and the staff member is expected to work closely with his students, particularly in the later years of the student's study. This personal contact, this ideal that the student learns from the master not just skills and knowledge but also ways of thinking and behaving, and a value system which identifies him as a university educated man, has been the traditional view of education of the young adult since history began, since the Greek philosophers sat with their circle of students around them. It is the basis on which the younger generations have over the centuries been inducted to their faith, be they Buddhist, Muslim or Christian. As one American once described a university, it is a professor sitting on one end of a log and a student on the other. With this educational philosophy, the personal interaction between scholar and students is seen as the key to university education.

What does it mean in operational terms? It means a drastic restriction on the numbers of students who can be admitted - a very limited access; it means high costs because of the large numbers of teachers required. Importantly, since the focus of the educational exercise is the teacher rather than the student, timetabling, courses taught, conditions of enrolment and of progress through the course tend to be highly formalized in the framework we all know - semesters, academic years, credit hours, pre-requisites, majors and minors and course patterns - and so on.

I have described the different schools at length even though they do not exist in their pure form and neither has been outstandingly successful in living up to its philosophy. However, these competing views of what higher education is about create the greatest dilemma faced by universities and by the governments that fund them when questions about more open education are raised. How does one have open institutions while retaining a system of education which produces intellectually and socially alert graduates able to provide technological skills, able to advance human welfare, not just in a material way but more importantly in the realm of values and in the realm of leadership in order to achieve a more equitable and human society? There is no answer to this dilemma and but it helps explain why the large open universities of the kind we find here in Thailand are to be found in few other countries. It helps explain why our technological know-how has not been effectively utilized even in the universities of the most advanced nations.

Another contentious issue where debate on open education takes place is that of "how many graduates does a nation need?", and a subsidiary question is "how does a society determine who will go to university?" This question of access thus determines the level of openness of a nation's higher education institutions. As I indicated earlier most governments talk about free and open higher education to all who seek it, but the funding of institutions is such as to allow only a small percentage of the eligible to proceed. Most countries now recognise that a high proportion of the costs of higher education are paid out of state finances, and governments are very aware of the competing demands for financial support. So they ask, how much of the country's budget should be allocated to education over and above providing, in the first place, 6, 8, 10, or 12 years of compulsory education for all citizens and,

in the second, for the country's needs for professional manpower - doctors, engineers and teachers? What are the social benefits of investing government money in university and college education above the level necessary to meet manpower requirements? The outcome in most countries has been one of very little shift from the traditional institutions. Access is still very much restricted on the basis of academic attainment or academic potential. Some attempts have been made to redress the social balance of university student bodies by providing scholarships to those unable to pay and by writing in affirmative action legislation to ensure that minority groups and women get their share of the places. But, the overriding practice remains one of limited access based on some form of academic attainment.

A question related to that of how many graduates should a country produce is that of manpower needs and manpower planning. One of the greatest dilemmas in the provision of university places, particularly in developing countries, is that of government commitment to open education for its citizens, on the one hand and, on the other, commitment to the concept of manpower planning. They are in every way diametrically opposed. For distance students, part time students, late entry students, the easiest and most attractive courses for them to attempt are in the areas of law, business, politics, education and other social sciences. They are also the least expensive for open universities and distance education units to mount and so are very popular with governments. Yet these discipline areas are the least likely to appear on manpower projections charts. Most of these students on graduation will have expectations of government employment, preferably in the capital city but certainly in the urban environment of larger towns and cities. Does this suggest a social problem of considerable proportions? Can graduates be diverted from the expectation that graduation will lead to employment or will there be created an educated and restless mass of unemployed, creating a threat to political stability? As proponents of open education we may have to have parallel programs to ensure that the students have realistic expectations on graduation. We may also have to develop programs which do indeed complement the country's manpower plans by recognizing the need for a better educated society. Additionally there is need for a realisation that we may need fewer open universities and more open institutions providing non-formal programs which will satisfy the citizens' desires for more knowledge and more skills but also ensure that those skills are applicable to current needs of society and do not lead to undesired and avoidable social and political pressures.

In addition to problems associated with access, two other related areas of concern to educators contemplating alternative forms of higher education are problems of delivery of educational services and the need for alternative organizational structures to enhance the quality of what we do. Issues relating to delivery have come to the fore because of the two developments springing from the potential that modern technology brings and the change in emphasis which open education has brought by shifting the focus of attention from the teacher to the student.

One of the greatest challenges facing open higher education is how to make effective and efficient use of the range of technological aids available to us. I see it as a challenge, but not because of any problems of knowledge or understanding. The nations of this region are fortunate in that they have ready access to relatively cheap technology and when you visit Thailand's two open universities on Thursday you will see an impressive array of this technology. New nations, new institutions can slip easily into the use of the new information technology because they are not encumbered by the traditions and prejudices developed in the older established universities over decades. The challenge, rather, lies in the fact that the quickest, simplest, cheapest way of using technology is when it is used as a teacher-centred tool. The teacher makes a TV presentation conveyed by satellite to all corners of the country; he makes an audio or video cassette or a structured computer learning program. It is the

most common practice but unfortunately, while it might provide opportunity for a more polished presentation, it has the effect of putting greater distance between him and his students. It reminds me of the American poet, H.W. Longfellow's lines:

"I shot an arrow into the air,
It fell to earth, I know not where"

Open education must be something more than open access. Like the arrow, we need to know where it lands and what effects it has. As I indicated at the beginning, we have to be concerned not just with access but also with outcome. Open education will be a success only to the extent that it gives its students reasonable expectations of graduation. Technology must be something more productive, more interactive than the 'talking head' on the TV screen that is all too prevalent now. Technology, therefore, in the open education system must become more student centred. It must advance the opportunities for openness according to the dimensions I listed - some considerable control by a student over this own courses and timetable, some opportunity to interact with the course leaders and, if at all possible with other students.

Some of us see the new technological age as one of men or women sitting in isolation communicating with a machine. Give a student the technological aids and let him proceed from there. But this ignores a fundamental trait of human nature which transcends race and national boundaries. This is the gregariousness of human beings. Interaction among people is one of the most effective ways in which we learn. It is a rare person indeed who can learn and gain full understanding by interaction with machines. In industry we are trying to break down the inhumanness which the machine age imposes. We can hardly adopt the reverse process in education. Nor is there any need to. It will cost more money, more time in preparation; a changed attitude on the part of both administrators and teachers but the technologies available to us have the potential for interaction of the desired kind.

There is also another area, much neglected at the present time, in relation to the provision of services to ensure efficient educational practice. This relates to non-academic services to students. When I speak of services I refer to more than the existence of counselling and career advisers, important though they be. I include the professional competence of both academic and support staff to ensure that an appropriate learning environment is present. The neglect in this domain to date probably stems from the tacit acceptance of the Peters's industrial model for open education. Like all theories, it is helpful to our understanding of some facets of the problem but it is very incomplete and I disagree strongly with it on other points. Peters, as you recall, saw the open university being governed by technological rules since he perceives that this is happening in industry. Yet this is far from true in modern industry. Industry indeed devotes a considerable proportion of its budget to the social aspects of its organizational life; the personal welfare of its workers is seen as having a direct bearing on the quality and quantity of the products produced. Business schools devote many hours to the study of industrial psychology. To this extent the industrial analogy of Peters breaks down. Education is probably the most personal of our social programs and while we can and do adopt some industrial procedures to ensure efficiency in the operations of our educational organisation, the core activities remain inextricably tied up with human interaction. One cannot shoot an arrow into the air and not care about where it lands.

In universities, open or traditional, teachers must know more about their students, themselves and about what is necessary to provide effective learning environments. The students, like the worker in industry, need to be trained, trained in their case in the procedures of learning. An inefficient learner is an inefficient graduate. If we are producing

inefficient graduates, we are not offering low cost education as the statistics might indicate but are really wasting community money and resources. So I stress that effective delivery services applies to both teachers and to students.

Fortunately, when one surveys the international scene and the kinds and areas of research being undertaken, there appear to be emerging interesting outcomes likely to shed much light on the problems which face us, particularly in open universities and colleges. Time will be needed for research information to percolate through the education system but I hope that conferences of this kind will hasten the process. If I wanted one central idea to stay with you as a result of my presenting this paper, it would be that you would leave this conference aware that there is much emerging from research which will enhance each of us professionally. Not only aware but I hope you will also express determination to find out more about it. Let me point you to a couple of appropriate avenues to follow.

I find the work of the Goteborg group in Sweden in relation to student learning something of considerable importance for us as teachers, for learners, for course designers. Ference Marton and his group have been concerned with the learner's own perception of learning. Thus one learner sees learning as "a qualitative change in one's way of understanding some aspect of reality".¹⁰ For another "learning is to memorize something, to be able to retell something one has read".¹¹ These two concepts of learning, one linked with "two distinctively different concepts of knowledge", namely knowledge as ways of viewing reality on the one hand, and on the other "knowledge as a collection of answers"¹², indicate how a learner is likely to experience learning in different ways - what Marton has referred to as 'deep' and 'surface' approaches to learning. These are not individual characteristics - the differences between poor and good students - but rather they are the particular forms of attention of a learner at a given time. All of us are deep or surface learners some of the time but what the learner needs to know is how to utilize each style appropriately. What we as teachers need to realise is that not all courses or all sections of courses have equal value for all students. For some the course, or parts of it, have peripheral background value and probably require no more than surface learning; for others a deep understanding of the principles involved, of the interrelatedness of these principles to each other, to other strands of learning, is essential.

Let me refer to another science and research finding relevant to open education. If one of the major aims of open education is to give access to less privileged groups in society: those from rural areas, those from poor families with little or no tradition of learning, then our current teaching strategies might be far less successful than we might desire. Researchers in the area of communication¹³ are finding that where the medium of instruction is the printed page, it is likely to enhance the probability of success of the student with an affluent and privileged background and decrease the probability of success of the student from the disadvantaged background. In other words, by our heavy use of printed material as the medium of instruction, we are probably further disadvantaging the disadvantaged student. Such students are more likely to succeed where TV is the medium of instruction. I therefore believe that the Canadian experiments, relying heavily on TV and radio, will be more effective in helping disadvantaged groups than in Australia where reliance on the printed word is the norm.

I think you will agree that the more disadvantaged the student is the more need there is for our understanding and support. Open university students are undoubtedly the disadvantaged among university students. We need to be conscious of their disadvantages and provide services to help overcome them. In this area of communication I have been referring to, as Sparke¹⁴ has pointed out, there is a whole range of communication behaviours

in the traditional classroom which is not possible at a distance or where technology replaces the teacher. This communication is both verbal and non-verbal; the informal conversation, the formal presentation, the body language, the opportunity to interact. All of this has considerable influence on the education which takes place. Keegan¹⁵ has emphasised the need for what he has termed "linking systems" in open education to balance the absence of these interpersonal communication systems.

The strands which make up this research are international and it is concerned with developing both theoretical frameworks and practical guidelines for course design. The Open University in the UK has been a pioneer with its concept of course development teams. Other distance learning universities - Athabasca in Canada, Deakin and New England in Australia - have advanced on this early work. In conjunction with Sukhothai and the Asian Institute of Technology, my Institute ran a workshop here in July 1980 on Distance Education. This current conference is but one of many contributing to our growing knowledge of open education. There is a steadily mounting library of papers addressing crucial issues. Universities, such as mine, are running training programs in the area. We, for example, have a popular one-year post-graduate program the object of which is to provide teaching staff in higher education with the understanding and skills to write courses. We are finding that the theories and practices arising out of earlier systems theory - items and needs analysis, and conceptual mapping - help in defining institutional and course objectives, which in turn point to appropriate course materials and teaching strategies. We are also concerned with the issues of teacher/student interaction.

In similar vein, much research and teaching has been directed to the learning styles, abilities and attributes of the young and not so young adult learner. We have come to re-examine the theories of Carl Rogers and Abraham Maslow, with their interests in motivation and freedom for self expression; of Perry as he relates maturation with attitudes to learning; of Bruner and Ausubel with their researches on how we learn and levels of learning. Some, such as Skinner and Gagne are particularly relevant for open education with their theories on which much programmed learning and computer assisted instruction procedures have been based. Of value too are the theories of the experientialists since these are particularly relevant to adult learners, to individual and self planned learning on which the real success of open higher education depends. My task here is not to show that I know the names of learning theorists in three or four continents but to stress that there is a considerable body of knowledge and of theory which can help us as teachers understand the young adult, his learning styles and maturation, stages and knowledge, which is as essential to us as academics as is our knowledge in our discipline areas. It is particularly important that we have new pathways to learning, such as open university education, but these new ways, these open universities will be successful only to the extent that we adapt and change our professional styles to meet the challenges from students, from programs, and from the technologies which these new systems will use.

References

1. Anderson, Robert, "Open All Hours in the Best Tradition", The Times Higher Education Supplement, July 29 1983, p.11.
2. For a description of Open Education in Nineteenth Century Britain, read Marriott, Stuart, A Backstairs to a Degree - Demands of an Open University in Late Victorian England, Leeds, Leeds Studies in Adult & Continuing Education, 1981.
3. Moore, Michael, On a Theory of Independent Study, Hagen, Ziff Papiere 16, 1977, p.2.
4. Articles in Identitas, newspaper for Hasanuddin University, Indonesia: by Professor Dr D. A. Tisnas Amidjaja, then Director General of Higher Education, July 5, 1982, p.5; and Professor Drs pramoetadi, Director of Academic Facilities Development, Directorate General of Higher Education, January 24, 1984, p.5. Also report in Jakarta Post, December 8, 1983, p.3.
5. The Times Higher Education Supplement, March 23, 1984, No 594, p.1.
6. Teather, D.C.B., Towards the Community University, London, Kogan Page, 1982, Chapter III.
7. See papers in Canadian Journal of University Continuing Education, Vol 1, 1979.
8. Peters, Otto, Dis Didaktische Struktur des Fernunterrichts, 1973, p.207.
9. *ibid*, p.225
10. Marton, Ference, Beyond Individual Differences, Hagen Fernuniversitaat, August 1983, p.4.
11. *ibid*, p.4
12. *ibid*, p.5
13. See Tichenor (1970), Rogers & Danziger (1975), Cook (1975), Galloway (1974), et al.
14. Sparke, J.J., in Keegan, D., On the Nature of Distance Education, Hagen, Ziff Papiere 33, 1980, p.31.
15. Keegan, D., On the Nature of Distance Education, Hagen, Ziff Papiere 33, 1980.

Dr. Banphot's Comments :

Thank you, Dr. Guiton, yesterday, some twenty years ago, Professor Elton in his first keynote speech on the philosophy and concept of Open Higher Education, he appropriately quoted the famous poet that is TS. Eliot that in the end is my beginning. But in my case I will begin differently; that is, I will begin at the beginning; I am quite happy to have met Dr. McCaig again after some six years have passed since we met in the office of the Institute of Higher Education Development in Singapore. His address concerning the international scene of higher education in the open sense actually has covered a vast range of area, and I think I have only about 10 minutes to comment upon it; so I won't go into much detail. At the time when I met Dr. McCaig in Singapore I had a good discussion with him. But at the time I did not have any open criticisms against him. But at the present time, I think that the atmosphere is open and I can comment upon him openly as well. When he tried to survey the vast scene of Higher Education from Australia, Where he is from, to other countries Indonesia to Europe in Spain and to North America. Actually it was quite a big path and I wish to compliment him on his ability to deal with such a vast scene comprehensively and within a limited space available, that is, within some twenty pages. The very fact that Dr. McCaig could cover it within twenty pages means that he must have used his judgement in selecting only a few countries to mention. And if I may take the opportunity just to make my own observation about the universities he mentioned; it would be something like this Most of them are under ten years old and actually even one or two of them are yet to be born. That is, one month from now in Indonesia there will be the so called Open University in Indonesia, and in Japan, after some six or seven years of trial and error, the Japanese government finally came to the conclusion that an open university is to be set up. At the time of planning it was supposed to be called a "passing university". And from Japan I will skip over to Europe, that is to Spain. Last April I just got a letter from the Rector of this new university in Madrid: Universidad Nacional de Education a Distancia. Only about one and a half year ago the University came into being. And another university he mentioned is Fern university in West Germany. I just read about it last night. It came into being in 1975, very recently. And in 1978, I had a good opportunity to meet with one or two distinguished participants. Prof Debeauvais at the time was at UNESCO Institute, called IIEP. At the time he was busy, but he was kind enough to let his secretary Mrs. Punia Tevawin take me to his university, it is a universite ouverte at Vincennes Paris and I read last night with my bad French. I found that it was set up in June 1976. So such universities are relatively new in comparison with the open university that Dr. McCaig mentions, which was started in 1970. And a year later, in 1971, Ramkhamhaeng University was established in Thailand, then followed by SukhothaiThammathirat University. So my first point is something like this. Because of the limited space available Mr. McCaig could not go into details and depth concerning one or two universities which I hope that he might have another opportunity to do so, particularly concerning the older universities. That is the case of the British open university and also in our case, RU, which has a life span of over one life circle ordeal. That is over 12 years, this is my first point.

My second point is that when he uses the term "Higher Education," Dr. McCaig seems to limit himself mainly just to university states. But actually when we make use of the term "Higher Education," we often mean something like the education about the level of secondary education which is widely called tertiary education. But I understand the problem faced by Dr. McCaig, that is, if he plunges himself into that realm of education it means something that he will have to jump into the vast amount of data, concerning community

colleges technical colleges, teachers' colleges and so on. So this has not been the limitation of a commentator, I understand. And in view of the limited time available, for the paper writer, myself and also many of you, may I bring you to my third points, that is RU. did a good job in starting this International Conference. But Dr. McCaig and many of us have so far had little time to go into details to look into the development step by step of the open universities such as RU., Firl universitat and also the university at Vincennes. So nay I propose in my remark that perhaps it would be a good idea that two or three years from now there should be another conference similar to this one to the conference look at their progresses and developments Perhaps the place of the conference might be somewhere else in another continent, in Australia, in Surrey Or in Baris belle France. It is up to us all to decide upon. Thank you very much.

Dr. Kitti 's Comments:

It is a great pleasure to be a commentator for the very distinguished Dr. McCaig today on the second session. From his presentation I think I could agree more on everything he said. Some of my comments which I have prepared have been mentioned by Dr. Banphot.

How ever I will use a very limited time to comment some points so that some of you may make some more comments or ask questions so that Dr. McCaig can answer some more. The first point I'd like to make I think is the same as what Dr. Banphot had mentioned earlier, that is, he presented an excellent survey of open higher education and this is to increase our understanding. I spent four years as a student in higher education and I learned very little about open higher education. It seems like I learned more in 30 minutes than I did spending four years in the United States. I learned more from many international perspectives on many universities, starting from Scottish University in the 19th century, Oxford, Cambridge, down to the most recent universities and the universities-to-be in the future. And I would like to thank Dr. McCaig in behalf of this university. I take the liberty to thank him as he praises RU. as one of the more open universities. Also in terms of education innovation, we learn more of the innovation views, like open access, open admission distance education, transfer of credit, TV and satellite technology, computerization and other technologies. The second point I'd like to make is that in his presentation various definitions are given such that they explain the variety of open universities. Many years ago I looked up in the Dictionary of Education, in the 73 edition, and it reads about open universities and colleges as follows: "An educational resource from which students of all ages may obtain a degree by completing work at home by correspondence, by TV, by attending classes and then preparing for challenging examinations in areas of knowledge when they are ready." So I thought RU. is a complete open university. But yesterday Professor Elton said that all open universities are half open, and today Dr. McCaig said that there are no truly open universities. So I doubt if we are an open University. But, however, later on he said that we are one of the more open universities. Still we are better off now than we think. He mentioned about the components. It is the definition of open Higher Education in terms of openness of space, of time or schedule, the openness of access, of admissions, of goals, of location, and of curriculum. Thirdly, I'd like to make a comment that his presentation clarifies the philosophy of Open Higher Education. We all need to ask questions like, "How many graduates do we need?" "How much money money should we spend for higher education?" And these questions are very relevant with man-power planning and financial

strategy. And we also suggest that in planning our man-power we should deal with both open and closed systems of education so as to ensure society's confidence. Another comment I'd like to make is that when he said that we, the open university, will be successful only if we know more about students and if we give a reasonable expectation of success, I agree fully on these two points. However, what we are doing at Ramkhamhaeng is somewhat different. We have more than half a million students. So it is very difficult to know all of them. Around fifty students come in to see me every day; I know some of them and I forget them a few minutes after they have left. So I think it is very difficult to know all of them, and one thing about giving reasonable expectations of success is also impossible. So we have little limited work to do on our program and one of our mottoes is "attahi atano natho" meaning "you help yourself." So if only he can help himself will he be successful. Of course, we have shot too many arrows into the air and some of them fell. We have found some of them and we are trying to find some more of the arrows. All in all, I think Professor McCaig's presentation very clearly stated the position on the varied aspects of national perspectives of open higher education and I would love to hear some more from our distinguished presentators. Thank you.

Dr. McCaig's Responses:

As an associate at the beginning, it is good to be among friends and Dr. Banphot and Dr. Kitti are both old friends. So I must thank them both for letting me down so very gently with their very kind comments. I think it is true that Dr. Banphot said that open universities in history are very young institutions and that we must wait, not be too hasty in our judgement of what is taking place at the present time. But as a student organization I am also aware that organizations, like people, go through various stages and we should be conscious of what stages we are in at the present time. Now I think open education generally is very good at facing up to the question of access. It is allowing people to come in. The door might not be fully open. It may be never open. But the opportunities to various countries, particularly countries of this part of the world, are very considerable compared to what they were a few years ago. So the question of access might be one stage. What I was suggesting in my paper was that we may have to move on now to the second stage of looking at the process we adopt. What do we do with the students we have? How successful are we in doing what we set out to do? And so I am suggesting this process needs much more attention in the future. Particularly, we need to tell students how to learn effectively. Most of them don't know. They need that kind of support. We need to tell the teachers how to teach effectively and we need to use new technology in a more effective way than we have now. I think the potential for technology is tremendous. I think it is available in this part of the world more easily than in a more traditional place. Therefore, these are the areas that we should concentrate on. I agree with Dr. Banphot that we need another conference, but I ask that it be held in five years' time and look at the second stage rather than the first. Dr. Kitti raised the matter of financial support and I think this is one of our dilemmas. Every one of us in this room believes in the need for the democratization of higher education, so more people have access, for all the barriers to be broken down. Yet I sometimes wonder if they are really relevant because when you talk to politicians they talk in terms of rupee or baht or dollar, whatever it might be. There seems to be a huge gap between what governments are concerned with and what we, as educators, are talking about. And so the relevant question is something we must face up to, somehow or other that gap between politicians and educators must be closed.

Questions by Lahim from Malaysia.

I would especially like to ask the question of students' determining the courses, the curriculum and so on and so forth. Now if we were to take an example of Ramkhamhaeng University where there are seven hundred thousand students registered in the university, how do you match what students want and what the university can provide? The second one is with regard to open higher education. What is the man-power planning when you have the sheer number of seven hundred thousand students? Now how much of this dilemma can you overcome? Thank you.

Answer by Dr. McCaig.

My friend from Malaysia asks the "sixty-four thousand dollar question." Numbers are the big problems. With regard to student choice, we can go a fair way on this by breaking down many of the barriers which now exist. Academics are very fond of writing in prerequisites and structures for degrees and such which may suit their particular interests but which may not suit the interests of the particular students. Now, of course, we are idealists. For every student, we have to do this where the student sits down with a supervisor or helper and works out his own program. That is a beautiful idea but it is unrealistic.

But we can within the present framework of course break down barriers. Given that a person might not have a prerequisite to go into computing, he also has more time. The big advantage of distance education is that one may want to take two years to do a course which actually takes one semester. So there is no reason for excluding him from courses he might want to do on the ground that he is not prepared. So I think he gives the first step to break down the barriers between course and degree structure, and let us have much wider choice. This is not just open educational courses, it is education generally. The second question, manpower, I think is the difficult one. To give the students what they want and to meet manpower requirements and with respect to the point made by Dr. Kitt, we have to be looking at a wider kind of organization. We may have to have institutions such as a university concerned with manpower training specifically, and it might be selective in order to get the most efficient training possible. But we also have to think in terms of what was referred to yesterday as the third stage the consumer-educator. And it may have to provide other structures which meet the need of the individual students and allow free reign to the people in those institutions to do the thing they want to without any particular reference to job or to manpower needs. If we can get an attitude among people that learning in itself can be a useful, satisfying, self-fulfilling kind of activity, then we can move at this third stage to provide the kinds of services to meet those needs without their having undue expectations and without any great drain on the resources of governments.

Questions by participants from Thailand.

I am Phavanada from Thailand. Dr. McCaig quoted in his paper about how many governments are serious enough about open education to address the issue of how to produce good scientists and technologists by means of mass education. What is your own reaction to this?

Answer by Dr. McCaig.

I believe that there is a good need to do it and that the governments are demanding that we train more technologists and scientists. I quoted the East German example as one possibility. You get academic objections to the idea of teaching the so-called hard subjects by distance education and we tend to resort to the social sciences when we open our distance education institution. The use of video-tape particularly combined with linking people by telephone, getting a small group together to discuss under the leadership of a tutor may be ways of achieving of these. I don't think we are going to do it with the very large institutions. The word "mass" may not apply but at least we can make some start by using the new technology and by looking at an alternative organizational form to bring this about.

IMPACT OF MEDIA AND TECHNOLOGY ON OPEN HIGHER EDUCATION IN INDIA *

Introduction

I thank the Ramkhamhaeng university, sponsors of the International Conference on Open Higher Education to give me an opportunity to survey the state of Distance Education in India keeping in view the impact of media and technology on its development. By way of introduction it is necessary to point out that the idea of organising education through correspondence lessons originated in the nineteenth century almost simultaneously in U.K., Germany, U.S.A. and USSR. In recent years, correspondence education has not only moved apace but has also been organised on scientific lines in almost all the countries which offer this facility. It is no longer considered a peripheral or inferior form of education. Correspondence courses need support on the ground that they would relieve the pressure of admission to our colleges and university departments. The adoption of correspondence education must be considered a direct outcome of the social urge for education and towards innovation in education. The dissemination of knowledge to large sections of the community is an important means for providing greater opportunity to all sections. The cost of correspondence education is also relatively less than regular full-time courses, as it is found that with an enrolment of say 1,000 the courses become self-financing after the first two or three years. This is an important factor in the development of education in a developing country like India.

Distance (correspondence) education has already established itself as a legitimate channel of instruction, not only in half a dozen universities as in 1972, but on as many as 32 campuses of universities or institutions deemed to be universities, all over India. The large number of students who come to the fold of distance education, the excellent results they have shown and the proliferation in the nature and level of courses from the purely traditional to the non-traditional and job oriented-which have come about as a result of persistent and popular demand-all this goes to show that this system is now as much established as the traditional system of classroom teaching. Although the main medium in imparting instruction is the printed lesson, yet a well organised correspondence course would supplement it by personal contact programmes, response-sheets and radio talks. The writing of lessons for students enrolled in correspondence courses would seem to be the most crucial point in the entire programme of correspondence education. On the quality of lessons would depend the overall standards of correspondence education. On the quality of lessons would depend the overall standards of correspondence education. We have to ensure that lessons are different from the ordinary cram books or cheap bazar notes already available to students in plenty in the open market. The first thing that the teacher has to realize in the writing of a lesson for correspondence course students is that it has to be different from a class-room lecture, a radio-talk and an ordinary text-book. In other words the writing of a lesson requires not only the expert knowledge of the subject matter but also technique of presentation. Since a paper is usually divided into 20, 25 or 35 lessons and these lessons are, of necessity, written by different authors, we have to ensure that there is some continuity in the instructional material,

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passed on to the students at different periods of time. Care is taken to see that lessons are written by eminent teachers in the subject, wherever they are available in the university or outside the university.

Correspondence instruction cannot be imparted merely through the printed word or the course material or lessons. The instruction has to be supplemented through other media and ancillary services. Of these supplementary aids, personal contact programmes and evaluation of response-sheets are the most integral part of the system of correspondence instruction. They help in establishing the essential two-way communication between the teacher and the taught and create an enduring rapport between them. The personal contact programmes bring the students face to face with their teachers, and that lends a personal touch to this seemingly impersonal system of education. Once the student has met and listened to the live voice of his teacher, the lessons and the teacher's comments on his response sheets begin to convey the personal touch of the teacher. Personal contact programmes, through intensive class-room instruction, help in giving proper orientation to the students and add to their motivation. The individual guidance and counselling which should be available to the students at these programmes would instil confidence and encourage regular study habits among the students. Some educationists plead that attendance at personal contact programmes should be obligatory for all the students. Academically it is a sound advice but we cannot shut our eyes to the problems that students have to face in getting permission or leave from their employers for attending these programmes. In this connection it is important to note that in the U.S.S.R. all in-service people studying through correspondence courses are given study leave for this purpose.

Another important service that is provided to make the system of correspondence education effective is a well organised Correction or Evaluation service. The students would be encouraged to send in their responses to the lessons; they are properly and promptly corrected and returned to the students with detailed and useful comments of the teachers. This sort of feedback is very essential and it can make education through correspondence much more effective than the education imparted in the colleges where the teachers hardly correct any assignments or composition of the students. Neither the teachers encourage the students to attempt written assignments nor do the students feel motivated to write any. They skip even the house examinations, and the teachers hardly seem concerned about it because it gives them relief from the drudgery of evaluating answer books. Radio talks have proved to be a very interesting feature of correspondence courses in most of the countries where correspondence courses are gaining popularity. In India, Delhi, Patiala and Chandigarh institutes have been able to arrange a regular radio talks programme in collaboration with all India Radio but still we do not have adequate number of talks. It hardly works out to 20 to 25 talks per subject per year. The Ministry of Information and Broadcasting keeps on getting reminders to provide maximum coverage of Radio programmes for the correspondence courses institutes. It however seems to be never try that these programmes should, in addition to talks, include group discussions and seminars and ensure student participation also. We should try to develop our Radio programmes on the lines of two-way Radio communication as used in correspondence schools and Schools of the Air in Australia.

New Media

In this age of sophisticated mass communication media, we should make serious efforts to explore and to make full use of other audio-visual teaching media also and try to integrate them with our correspondence courses. Whereas the lessons and the books appeal

solely to the reading faculty of the students, the audio-visual media stimulate the other senses too, provide higher motivation than the traditional methods of instruction and make the learning process more interesting and pleasant. The most important of these media is the *Television*. Its main advantage is its accessibility-it reaches every home-and it can be entertaining and attractive. It can also make available to the learner educational resources that would be difficult to provide in any other way-such as film of overseas countries, ingenious and expensive graphics, access to world leaders in politics and education. The Government should provide special channels for the educational programmes of correspondence courses institutes. Although we have not yet been able to develop an effective network of television, it should be possible to make a beginning. This is of utmost importance. Television and radio programmes constitute the mainstay of the instructional programme of the Open University in England which has broken new and very significant ground in the field of education.

It is, of course true that *Print material* is more useful for providing content where a good deal of ground needs to be covered or where the subject matter needs to be dealt with in depth, or where certain skills-analytical, mathematical, conceptual-need to be developed. Like broadcasting, print can reach into every home if there is a decent postal service.

Video cassettes can assist the application of the more abstract and analytical ideas covered in print to the more concrete and complex real world. Students can be asked to understand how these abstract concepts explain real-world situations and the limitations of such concepts through video. Video can provide models or bridges to understanding, by giving concrete examples or visual models of abstract ideas. Broadcast television can also do this, but video is more suitable because of the increased control and repetition available to the student.

Audio cassettes allow for mastery learning, explanation and discussion of graphical, tabular and printed conceptual material, practice in problem solving, and exercises in mathematical processes. Audio cassettes can be used for providing resource material, such as discussions, interviews, case-study material, language use, for analysis by students.

Telephone tuition enable individual problems to be dealt with directly by a tutor, and can provide seminars and tutorials where interpersonal and interactive communications can take place between students and tutor and students and students. Telephone tutorials can provide guidance on assessment, feed-back on progress and a broadening or linking up of core teaching materials. The British Columbia University has set up a speaker telephone system at different centres where students are able to collect their instructors once a week. But for this we shall need a very efficient telephone service and we do not as yet have that in our country.

Viewdata provides the opportunity for computer-assisted or programmed learning and enables material to be corrected or updated quickly and cheaply. It can also cut down on administrative mailings and provide easier access to administrative information and student records. There is no super medium. Each can serve different functions. Thus media do not differ as much in their suitability for dealing with different content but do differ in their suitability for dealing with different learning skills or teaching approaches. Each medium therefore enriches or adds to the educational process. The logical consequence of this is not to select one or two 'super-media', but to use a range of media in a planned and integrated manner so that variety of educational functions and approaches can be offered. I would therefore urge the University Grants Commission and the Ministry of Education to provide special grants for streamlining the system of correspondence instruction. To begin with they may allow a few selected universities to start pilot projects for research in systematic

development of ancilliary services and mass communication media in order to strengthen this non-traditional method of imparting education through correspondence courses. The Universities which have instituted correspondence courses should also pay special attention to this and make liberal budgetary provision for the development of ancilliary services and mass communication media which should form an integral part of the correspondence courses. The world today is caught in a communication revolution and if we want to catch up with world, let us not lag behind in building up these ancilliary services.

RADIO AND TELEVISION UNIVERSITIES IN CHINA*

With the founding of the People's Republic of China in 1949, came radical developments in all sectors of higher education. However, the training of sufficient numbers of highly qualified people needed for national reconstruction was still an urgent and difficult task. Along with the establishment of the TV network in China, regional "TV Universities" were set up in 1960 in big cities like Beijing, Shanghai and Shenyang. The TV University in Beijing offered courses in natural science and also had a Chinese language department. These were separate courses for continued education; they lasted four and a half years, except for the physics courses which ran for five years. The University provided in-service staff members and workers with a chance to continue their education during their spare time. Apart from presenting TV lessons, the University also compiled and published teaching materials.

Altogether over 8,000 students graduated from Beijing TV University during the years 1960 - 1966, and over 50,000 received certificates for various single courses. Many of these people went on to make important contributions in the fields of industry, agriculture and education. The TV University had proved itself an effective way of developing higher education. But this newly emerging initiative came to a halt at the beginning of the "cultural revolution" (1966 - 1976).

Since the downfall of the "gang of four", our country has entered a new historical period. Our goal now is socialist modernization; and if we are to achieve this, we need to train far greater numbers of qualified specialists in all fields. Provision must also be made for the large number of young people who had to suspend their study during the ten years' upheaval of the "cultural revolution", and who are now anxious to continue their interrupted education. Given these factors, the importance of establishing TV universities and developing distance education is obvious, both in the immediate future and in the long term. In the spring of 1978, the State Council approved a plan to set up a national radio and television university, and the Central Radio and Television University (CRTVU) was formally established in February 1979 after several months of preparation. Since then there have been four intakes of over one million students enrolled as registered students, plus a great number of self-study free-time viewers.

*Prepared by the Central Radio and Television University, Beijing, China

Student Intake*

	1979	1980	1982	1983
Full-time students	115,239	79,377	165,720	231,241
Part-time students	302,679	80,124	55,639	18,728
Total	417,918	159,501	221,359	249,969

The intake in 1979 and 1980 included over 150,000 full-time students who completed all courses and were awarded three-year college diplomas. This figure comprises about a quarter as many graduates as those attending conventional universities during the same period of time. At present, there are about 350,000 registered students and this figure amounts to about 600,000 if we include free-time viewers.

Hereunder follows a brief description of the organizational system and the administrative structure of the University and the courses offered.

I. Organizational System and Administrative Structure

The national radio and television network of higher education has formed a complete system throughout the country. It consists of the television university organizational structure at four different levels: the Central Radio and Television University, radio and television universities in the provinces, municipalities and autonomous regions, over 540 branch schools; and "grass-roots" classes run by factories, mines, shops, etc. at the lowest level work various enterprises, institutions and organizations throughout the country.

China's TV universities are run at four levels, corresponding to the organization of China's system of national and regional governments. The CRTVU at the highest level guides national work; the provincial, municipal and autonomous regional TVUs at the second level guide provincial work; prefectural and civic TVUs at the third level run branch schools; and "grass-roots" classes run by factories, mines, shops, etc. at the lowest level work directly with TVU students.

The CRTVU is an institution of higher education under the joint leadership of the Ministry of Education and the Ministry of Broadcasting; TV universities in provinces, municipalities and autonomous regions are under the auspices of local governments; their branch schools under prefectures and cities. Funds for TV universities at various levels are allocated from governments of corresponding levels. The CRTVU guides the educational work of provincial TV universities, which in turn guide their branch schools. Different levels of TV universities have different responsibilities as explained below:

* In 1981 no students were enrolled.

The CRTVU

1. produces and transmits teaching programmes for major courses;
2. guides teaching and administrative work of provincial TV universities;
3. prepares unified entrance and end-of-term examination papers and marking standards, and decides on the procedures of the exams;
4. compiles and publishes supplementary teaching materials, and produces and distributes audio cassettes and video tapes;
5. trains teachers and administrative staff members.

Provincial TV Universities

1. are in charge of administration of teaching and learning activities at their branch schools;
2. organize entrance and end-of-term examinations, and the marking of the examination papers;
3. produce and transmit teaching programmes for local use;
4. keep student records and issue diplomas and certificates;
5. distribute teaching materials and audio cassettes and video tapes;
6. train teachers and administrative staff members.

Branch Schools

1. organize and oversee student activities:
 - a. viewing and listening of teaching programmes
 - b. tutorials
 - c. laboratory work
2. organize examinations and tests;
3. compile student records at all stages of their study;
4. organize teaching and research activities of tutors;
5. distribute teaching materials.

Classes Run by "Grass-Roots Work Units"

1. organize viewing and listening of teaching programmes, tutoring, laboratory experiments and other activities;
2. administer teaching and learning classes;
3. organize recreational activities and physical training for students;
4. carry out political and ideological work among students.

II. "Run the University with the Support of Society as a Whole"

TV universities are an integral part of society. Their students come from factories, mines, shops, research institutions, government offices and so on in various parts of the country which are reached by our national TV and broadcasting network. The "grass-roots work units" train their staff members through TV universities, and they provide them with facilities for study, pay their tuition fees, and allocate time off to enable them to study. The various work units make arrangements for their staff members to study at TV universities in a way which is planned according to the developmental needs of each unit. Some students take all the courses, whereas others take only single ones. They are organized into classes which fall into the following four categories:

1. Classes run by bureaus. (a bureau, here, means a department of local government with responsibility for education, or industry, or similar) and by companies (state run). Students who come from the various mines, shops, factories, etc. are under the auspices of these organizations.

2. Classes run by big factories and mines.

3. Classes run jointly by medium-sized or small work units.

4. Classes run by TV universities at various levels to cater for young people who have not yet been assigned jobs. Such classes are also run by large enterprises, such as a large factory or a coal mine.

III. Specialities and Courses

The main courses for TV university students are offered by the CRTVU; provincial TV universities offer minor courses, following a pre-established teaching plan. The CRTVU courses provide the necessary basic and fundamental theory for various specialities. Provincial TV universities also offer supplementary technical courses and tutoring courses. "Grass-roots work units," which run classes, also organize training in technical skills, and in the practical application of the principles the students have learnt in accordance with the specific needs of their future jobs.

The CRTVU offers over 110 courses for thirteen specialities. Eight of these are concerned with economics, and the rest with maths, physics, engineering, electronics and the Chinese language.

These courses provide a systematic education for students specializing in different disciplines, as well as in-service training for personnel in different places of work, who can thereby update their existing knowledge. The period of study is three years. Having finished all the courses, passed the examinations, and received the credits required, TV university graduates can reach a level equivalent to those of regular universities. This year the CRTVU decided to offer courses for four new specialities. These include chemical engineering, management engineering and chemistry, and some special courses for Party and government cadres in charge of administrative work.

IV. Target Students

The TV university's target students consist of in-service personnel and young people waiting to be assigned jobs. At present the former category makes up the bulk of the student body. In future we intend to enroll more young people waiting for jobs.

In-service personnel includes: workers, cadres, teachers, and science and technology personnel. The target students vary according to their different disciplines and also their modes of study.* Workers and teachers form the majority of those specializing in science and engineering, totalling approximately 90%. More cadres attend courses specializing in the Chinese language. About 90% of full-time students taking all courses are workers, and part-time students taking single courses are mainly teachers, totalling about 90%.

V. Categories of Students

TV university students fall into two main categories. They are registered students who have passed the entrance examination, and "spare-time viewers" who have not taken the entrance examination and who study on a self-instructional basis. The former are organized into tutorial groups, and enjoy a formal status as students of the TV university. The latter are not formally classed as students. However, they also receive graduation diplomas or single course certificates if they take and pass the final examination.

* modes of study refers to full-time, part-time and spare-time study

VI. Modes of Study

Registered students study in various ways, depending on (a) the subject they are studying and (b) the amount of time they need to spend studying. Science and engineering students may study full-time, part-time, or during their spare time. Full-time students take all courses, part-time students take two courses, and "spare-time" students, who are granted eight hours off work per week, take one course. The Chinese language students are mainly "spare-time" students. There are some full-time and some part-time students specializing in the Chinese language, who come from work units where they are allowed to use working hours in order to study.

VII. Conditions for Students During and after Studying at the TV University

In-service personnel are enrolled according to plans for training drawn up by their respective work units. This means that their application for the entrance examination should first be approved by the leadership of the respective units, after which admission is granted to those who pass the entrance examination and gain high marks. Full-time students are freed from their work and continue to receive their full salary, as well as free medical care and other welfare benefits. However, they are not given production bonuses, or other work related benefits. The students pay for their own study expenses, such as textbooks, stationery, etc.

After graduation, students are recognized as having equivalent status to that of regular college graduates; and where necessary, they are assigned new jobs in their original work unit, to suit both their own newly acquired speciality and the needs of the unit. They will receive the same salary as regular college graduates.

Young people who are waiting for jobs must bear the costs of their study and living expenses themselves during their TV university studies. After graduation, they will be employed by the local employment department according to their study records. When they are assigned a job, they will receive the same salary as a regular college graduate.

VIII. Media

TV University courses are multi-media, and comprise a combination of television, radio and print. At present, natural science courses use television as their main medium, and radio and print as supplementary media. Social science courses use radio as their main medium, and print and television as supplementary media.

Initially, TV universities had to adopt existing teaching materials written for classroom use in regular universities. Now they have begun to compile their own teaching materials, which are intended to meet the specific needs of distance education.

IX. Examination

The students' progress is assessed through examinations at the end of each term. For courses offered by the CRTVU, both unified exam papers and the system used for marking are designed by the CRTVU. Such exams are held on the same date throughout the country. Provincial TV universities are in charge of the organization of the examinations, and of marking the papers afterwards. The standards and conduct of the exams are very strictly safeguarded.

In the TV universities, the credit system is in use. Students who do not pass their exams can continue their study along with the following year's intake, until such time as they pass the exam and obtain the required credits. But full-time students who were previously

working (before being released to become TV university students) come under a different system. If they fail two end-of-term exams in any one term, or three examinations in different terms they must go back to their original work units. This category of student may go on to become a single-course "spare-time" student if this is approved by the leadership of his/her work unit.

X. Tutorials and Laboratories

Tutoring is necessary to supplement the TV teaching because: (a) the teacher on TV cannot, of course, answer students' questions directly and (b) the television image or radio sound may be unclear, or even suspended entirely for technical or other reasons.

At present, tutors are mainly part-time teachers, though some are employed on a full-time basis by some branch schools and other groups. The task of tutoring will eventually be carried out by branch schools. Tutors come either from regular universities and colleges, or from factories and mines where they are employed as technicians. They are paid according to the number of hours they work. The following table shows the number of tutors in 1983.

Tutors at TV Universities (1983)

Part-time:	25,237
Full-time:	11,475
Total:	36,702

At present, students carry out scientific and laboratory work in regular universities and research institutions. Experiments are done during public and school holidays, or at other times when the laboratories are not in use. There is some flexibility in the number of experiments which students are required to carry out, as conditions vary so much between the different laboratories. Students having access to better equipped laboratories may perform more experiments than those who do not have a well equipped laboratory at their disposal. However, they must perform the required minimum of experiments, as without this they cannot graduate or be awarded diplomas.

XI. Production and Transmission of Teaching Programmes

Teaching programmes are produced by three groups:

1. Central Chinese Television (CCTV);
2. Central Radio and Television University (CRTVU);
3. Provincial TV universities (where conditions allow).

These three groups co-ordinate their output. The TV university has gradually been granted more transmission time, so that more and more programmes have been and will be shown; this means that number of courses available can increase. Transmission is as follows:

Organization which puts out the programmes	Type of transmission media used	Area broadcast to	Subject area	Time
CCTV (courses offered by CRTVU)	microwave	nationwide	natural science	33 hours per week
Provincial TV stations (some programmes are locally made, some are made by CRTVU)	television	provinces	natural science	varies locally
Local radio stations (some CRTVU, some provincial TVU courses)	radio	provinces	social science	varies locally
Branch schools (work stations) TV classes	audio-video equipment, audio-cassettes, video tapes	locally	social courses	—
Individual students	audio cassettes	—	social courses	—

In order to increase TV viewing time for the University's courses, it is planned to gradually set up special channels for educational use in big and medium-sized cities.

In future, developments in tele-communications and space exploration will make it possible to use an earth satellite to transmit programmes. This will increase the transmission time available to the CRTVU. This, together with other improvements, such as in the quality of TV teaching programmes, will mean the beginning of a new phase in the development of China's system of higher education by radio and television.

*Supporting Paper III***THE ADAPTABILITY OF THE RADIO
AND TV UNIVERSITIES TO SOCIETY***

It's unquestionable that the development of education can promote the development and progress of society. This means that the development of education itself must be adapted to the needs of social development, otherwise the educational course itself cannot advance. The progress of the China Radio and TV Universities has proved this.

Since the establishment of the China Radio and TV Universities in 1979, we have taken in 1,200,000 students who come from different parts of our country. 560,000 of these students have studied full-time, and 640,000 of them have been part-time students. In addition to this, there have been about 600,000 free-time viewers; that is students who study in their spare-time. In the past five years, about 140,000 full-time students have graduated, and about 211,000 students have finished part of the courses they had chosen to follow. Their standard has, generally speaking, reached that of other universities in China and TV University students have therefore gained public recognition. Up to the end of April, 1984, about 478,000 students are studying at the Radio and TV Universities. The number of full-time students is about 414,000 and about 64,000 of the students are part-time students. Also, there are about 400,000 'spare-time' viewers.

Until now, Radio and TV Universities have been established in 28 provinces, municipalities and autonomous regions in our country. Branch schools have been set up in 540 cities and areas. About 1168 countries have set up work units. The teaching classes amount to 16,000.

The number of full-time students enrolled varies from year to year. This is because of the different specialities we offer each year.*

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Year	Speciality	Full - time Students	Part - time Students
1979	Mechanical engineering Electronic engineering Mathematics Physics	96,787	179,776
1980	ditto	76,164	77,485
1982	ditto	79,869	42,261
1982	Chinese language and literature	85,350	12,545
1983	8 specialities in the fields of economics	119,000 (study for three years) 74,500 (study for two years) 11,500 (study in spare time)	total 205,000 people.

During the ten years upheaval (from 1966 to 1976) the system of education in China was greatly interrupted. This has resulted a lack of college graduates to replenish the contingents of teachers and of technical personnel. There is an urgent demand therefore, for college graduates from all walks of life to fill these gaps. In 1979 the Radio and TV Universities implemented a policy which required students to be given time off work to study for three full years. Positive responses came from various factories and schools, for they, also, were happy to enable some of their staff members or teachers to further their knowledge by taking the courses offered by the Radio and TV Universities. But this enthusiastic response did not last long. Although the courses offered the following year (1980) were the same as those offered the previous year. There was a decrease of full - time students, numbering 20,623 people (21.3%) Also, the number of full-time students included 12,000 high school graduates. If we subtract this number of students from the whole, we had only enrolled 44, 164 in-service staff members and workers. That comes to 66.3%, compared with the number of in-service staff members of 1979. We consider the reason for this decrease is that, it's difficult and often impossible for factories to release more staff members from their regular jobs in order to follow the courses offered by the Radio and TV Universities.

In 1981 none of the Radio and TV Universities in our country enrolled any students. In 1982, we resumed enrolment and continued to take in students in the four specialities. There was a slight increase in the number of registered full-time students. They amounted to 79,869. We offered a new speciality in Chinese language and literature, which enable the students to study all the required courses in their spare time. This attracted many more students and the number of enrolments rose to 85,350.

The enrolment from 1979 to 1982 of the Radio and TV Universities in the four specialities in natural science shows that the number of students and the number of specialities offered are closely related. This means that the key point now is how many in-

service staff members can be released from their regular work. Now China faces the problem of having a lack of people qualified in management. This is a major problem in trying to modernise economic management. Therefore, in order to deal with this problem, and after some necessary preparations, we decided to offer a new speciality in the fields of economic management. We set a relatively flexible study method which embodies three kinds of methods. Students can study on a full-time or part-time basis, or they can study in their spare time according to their different situations. The public response was positive and wide support came from various government departments, business banks, commercial departments, etc. They not only mobilized those universities and colleges specializing in financial and economic management to share our burden in doing the job of teaching, but also supplied us with a lot of material goods. And, they organically combined their project of training in-service staff members with that of our own.

In 1983, the number of full-time students majoring in specialities of economics reached 210,000. Besides those students, there were about 200,000 people who, on a voluntary basis, organized classes to study these courses on their own.

Apart from paying attention to the installation of specialities which are to be adaptable to social development, the Radio and TV Universities must also see that the courses offered suit the public need. Since, 1979, the Central Radio and TV University has run 36 courses. These have included courses in mathematics, physics, mechanical engineering and electronic engineering. The courses offered by the Central Radio and TV University are mainly in basic theory and technology; these courses are followed by students of any speciality. Highly specialized courses are left to the local Radio and TV Universities. They have the choice and freedom to decide if the courses are to be designed according to their own needs.

The reasons for this decentralization are as follows.

1. The applications of mechanical and electronic engineering are very wide and there are many specialities. It's therefore impossible for the Central Radio and TV University to undertake the heavy task of offering all these highly specialized courses.
2. Because the broadcasting time we are given is limited; as these more highly specialized courses only draw a small number of students, it is not economic to use the necessary TV time.
3. Since the foundation of the People's Republic of China, millions of students have graduated from colleges of science and engineering. They were scattered all over the country doing the kind of work related to the specialities they had learnt at college. This makes it much easier for the local Radio and TV Universities to find teachers for the courses they plan to offer. But since 1941, only a few graduates have majored in the fields of economics. Now, as our country is confronted with the project of strengthening its economic management, these graduates have already been used. If the Central Radio and TV University were to offer the basic courses in economic management and in theory, then we would leave the provincial Radio and TV Universities in difficulties, as it is difficult for them to find suitable teachers for these courses. But now, the reality is that every department and institution wants to have more graduates who can shoulder specialized work immediately. Thus, the Central Radio and TV University must offer more highly specialized courses in economic management, such as industrial accounting, bank accounting, commercial accounting, commercial statistics, etc, in addition to the basic courses in accounting and statistical theory. Only by meeting the public need, can we determine the content and the quantity of the courses. And as a result of this the course of the Radio and TV Universities can make rapid progress.

The more courses the public expects the Radio and TV Universities to offer, the more conflicting aims there will be for the teaching media which is merely relying on TV. Also, more TV hours will be needed for each course. The problem is that every course must be offered due to these circumstances, a new way of presenting the courses has evolved. This is to use the media of video and audio tapes and printed materials. This method is popular in a lot of distance education in other countries. But as the teachers of our Radio and TV Universities are from traditional Universities or colleges, they are used to using face-to-face teaching methods and, furthermore, a lot of students are also accustomed to this kind of teaching method. In fact, this method is not the right way to train the students to study independently. But now, multi-media teaching and learning and the raising of the students' ability to study on their own, are the demands of society. So we are left with only two choices; one is to meet the needs of society, and make progress, the other is to use methods which are unacceptable to the needs of society and will result in failure. Fortunately the teachers and students of our Radio and TV Universities have already started to get used to the multi-media teaching methods. This is a good sign.

The quality of training is a very important criterion to judge a university from. In order to ensure this quality, China's Radio and TV Universities have taken a lot of measures. The most important steps we have applied are :

(1) The students can't be enrolled if they don't pass the entrance examinations. So the level of the students enrolled is, more or less, the same and this make the teaching less difficult and more effective. As a by-product, the exams can, in a way, help to raise the cultural level of the young people of society, for they have to study and finish the senior high school courses before they are able to take part in the exams. (2) A unified national exam is implemented. The assessment of exam papers follows a unified criterion plus a strict examination discipline. Because the requirements for the students enrolled are very high, the graduate rate for the first two years was about 80%. But the quality is basically up to the requirements set by the Education Ministry and this is recognized by the government. The general public and various government departments have also shown interest in this. At present, more and more units and departments ask the Radio and TV Universities to train the in-service workers and staff members for them. We have got more and more public support. Our Radio and TV Universities are developing positively. But we still have room to improve. Our Radio and TV Universities are still run in big cities. We'll try our best to perfect our teaching system so as to spread education in the rural areas. The TV educational coverage is yet to enlarge and the outlying districts are still out of reach. We know that in comparison with many other countries, our Radio and TV Universities are still of lower standard. Yet, as long as we learn from other countries and are persistent in working for the prosperity of society, we are confident that we can make China's Radio and TV Universities better and better.

STRATEGIES FOR DEVELOPMENT OF CURRICULUM, PERSONNEL AND INSTRUCTIONAL MATERIALS*

Introduction

The Off-Campus academic programme of Universiti Sains Malaysia, Malaysia's sole tertiary distance education institution, had passed its one decade of history and is now entering a new phase of development. Its past history (1970-1982) is marked by the adhoc nature of its operations, instability of course offerings, inadequate recruitment and training of staff, and its strong reliance on the 'temperament' of lecturers and their deans within schools which offer the courses through the programme. The Off-Campus programme had very limited scope for development both due to the government's cautious attitude towards the system and the university's complacent outlook on the programme's role in the context of the feasibility of giving tertiary education through the conventional mode.

As the outcome of constant demands from the public for more places at tertiary institutions of higher learning, positive steps were taken to review the status of the off-campus academic programme with the view to expanding its role and improving its operation. After a year of thorough investigations of the system the Adhoc Committee empowered by the Senate to look into the matter, a comprehensive Report on the Proposal for the Expansion of the Off-Campus Programme was prepared, presented to, and passed by the Senate. At the end of 1982 with the blessings of its Council the university authority had taken steps to prepare grounds for the implementation of recommendations stage by stage.

A Glimpse of the Past

The off-campus programme provided only courses that are offered by its parent schools. The major disciplines that are involved in providing courses are the School of Humanities offering majors in Literature, History and Geography; the Social Sciences with three major areas, Political Science, Sociology - Anthropology and Economics. In so far as the Natural Sciences are concerned, students are only allowed to choose double-subject combinations from four science disciplines, e.g. Biology/Chemistry, Physics/Mathematics, Chemistry/Physics etc. For Mathematics, Students can specialise either in Statistics or Applied Mathematics; and for Chemistry, the fields of specialisation are Organic, Inorganic and Physical Chemistry. Whereas Biological Sciences and Physics offer a more general programme. Students who are admitted into the School of Humanities, the School of Comparative Social Sciences and the Science Schools who successfully complete the Programme, will eventually be conferred the Bachelor of Arts, Bachelor of Social Science and Bachelor of Science degrees, respectively.

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Over the years the academic programme had clung tightly to the course of development engendered by the degree system of the university; viz: the three year paper system, followed by the unitised three year system, and later the four year unitised system of the on-campus mode. But with these changes, the off-campus mode continued to follow its academic structure of providing **four years (minimum) of the off-campus mode plus one year of the on-campus mode** during the final stage of the students learning process. It could therefore be easily concluded here that at further end of its first decade of history, off-campus students had been expected to handle much heavier load of work than their predecessors. There was of course provision for a 10-year maximum period of study, but the tendency of the majority of students was to register for the maximum number of units of courses in order to be able to finish their studies at the minimum time of five years. It was mainly because of this reason that performance of many off-campus students of the later batches had been noticeably poor.

The mode of operation of the system at the beginning was fairly simple. It started as a programme under the umbrella of the Centre for Educational Studies headed by the Coordinator who is responsible to the Director of the school. The coordinator liaises with the deans of the schools in determining that there were enough courses to be offered to the students, that the lecturers provided the students with the teaching materials, and that the students received their goods. Working in such a fashion required very little professionalism. It was later found that it was inadequate and it was decided that the facility should be upgraded to a 'Unit' with the Coordinator responsible directly to the Vice-Chancellor. The Coordinator with the two Assistant Coordinators, one for the sciences and one for the non-sciences, however had very limited authority. Their main roles were limited to giving periodic reports to the various deans on the performance of the schools' lecturers with regards to their output in teaching, and reporting on the students' performance in their studies, and in supervising the work of the general staff of the Unit. It was only after the establishment of the Board for Off-Campus Studies Programme with the Deputy Vice-Chancellor (Academic) as its chairman, Coordinators, and assistant coordinators, deans of schools and other relevant personnel as board members--that many of the problems, otherwise remaining unattended and unnoticed, were ironed out. It was also through the discourses at many meetings, that many members were convinced that the adhoc system was full of shortcomings and lack of professionalism, and therefore concluded there was an urgent need for an overhaul of the whole structure, both academically as well as administratively.

The university contended that equal academic standards must be maintained and the following principles were closely adhered to:

- (a) Courses offered are essentially the same as those offered to full-time students;
- (b) Similarity in Course structures in each discipline are maintained as far as possible;
- (c) Staff members offering the courses for the Off-Campus Programme are also those who offer the same courses on campus;
- (d) Adequate time is provided for off-campus students to digest the learning materials given;
- (e) Some direct contact between staff and students is provided in the form of staff visits to regional centres, the annual 3-week Intensive Course, and the incorporation of a 1 year full-time component in the degree programme structure;

- (f) Examination papers for Off-Campus students are the same as those set for on-campus students.

While the academic community had high expectations of the performance of off-campus students, the necessary facilities given to them remained very basic for several years. At the very beginning, the teaching materials mainly took the form of a few sheets of instructions to students on how to approach the courses and some course outline. It was only during the later years that lecture notes were prepared for them, but these were often very brief and lacking in proper organisation. Thus students depended very much on the three-week residential schools held on campus in November-December of each year. During this Intensive course period the lecturers meet their students in the form of lectures and tutorials, but students often found that it was very strenuous on their part as the name 'intensive course' suggests; students often began their courses as early as eight in the morning and finished at ten in the evening. Besides attending the classes they were often required by some lecturers to sit for examinations or tests, and to look for materials in the library. Other face to face contact, especially for the science students took place during the weekends at the various regional centres from July to November and January to March. These tutorials and laboratory work were conducted by part-time instructors who are normally graduate secondary school teachers. Visits by the lecturers at these regional centres a month or two before the examinations were often utilised by students to solve many of their learning problems and to get 'examination tips' to help ease the examination fright. Other facilities provided include: selected reference books at regional libraries located at the town library, an experimental radio programme, and *pelapur* (Report), the regular 4-page Off-Campus newspaper.

Although off-campus enrolment was too small to cause worry among academicians, nonetheless it is highly necessary that the whole programme be studied from the point of view of its obligations to the students who had been accepted into the programme as well as off-campus being a programme of studies which should have been run in a way acceptable to the general norms of a distance institution. The number of intake each year was small with the average 60 into Humanities, 60 for Social Science, 100 into Science; by the year 1980 the total enrolment was Humanities 236; Social Science 226 and Science 239. Surprisingly however the success rate of the programme in the non-science had been very encouraging with the following number of graduates produced up to 1981: 317 Humanities, 304 Social Science; but rather sadly, the sciences emerged with only 66 graduates.

The focus of critics has always been on the inadequacies of the system. For the last one decade the weakness of the off-campus programme had been mainly the following:

- a. the relatively poor quality of learning materials and its limitation to the printed form,
- b. divided staff commitment to off-campus teaching,
- c. inadequate supervision of the teaching staff and the lack of thinking on the part of deans on the problems and solutions for the rather low off-campus performance, especially in the sciences,
- d. inadequate and limited regional facilities,
- e. lack of counselling on learning techniques and other academic matters at the regional level.
- f. inefficient use of face-to-face teaching situations,

- g. unrealistic expectations of student workload,
- h. lack of adequate staff development and training.

It was the line of thought of the various committees formed by the Adhoc Committee for the Expansion of the Off-Campus Programme that the steps to remedy the shortcomings mentioned above have become the basic for the main thrust of the Report.

A Better Programme for the Future

The University Authority had accepted the recommendations that the Off-Campus programme be expanded and the organisation be improved. The main thrust of the recommendations are as follows:

- that the Unit status be upgraded and more authority be provided to it so that it can easily monitor its own course of actions where necessary in respect to staff teaching and students learning,
- that the basic structure of academic programme and method of teaching be maintained but improved so as to make it more effective to ensure better performance and quality,
- better teaching materials be provided for the students and that more non-print form should be included to enhance students interest in learning,
- that a number of full time staff be allocated to the off-campus studies centre for the preparation of teaching materials and management of the courses,
- training should be given to both the teaching and administrative staff,
- that more permanent regional centres be established with the function of providing basic facilities for teaching, counseling and learning,
- that the off-campus should have its own curriculum, quite similar to the on-campus, in order to reduce the recurring difficulty of getting year-to-year lease of course offerings from the schools.

The changes that follow are not very drastic, but however promise a better course of development. The programme is expected to grow in terms of student numbers. By 1990 the student population would increase to 2280, and this figure is based on the government's guideline for off-campus intake at about five percent of the intake for all five universities. The new batch of students are now following the "packaged curriculum", which entails students to register and pass a fixed number of courses (ranging from 16-20 units) at various levels (year) of study. Although the number of courses are limited and therefore imposes limitations in the choice of courses, it provides a much easier administration terms of counseling, production, despatching and records, and in planning the time table both for the intensive courses and at the regional centres. The length of the programme has been extended to 5 + 1 years with the first five years being off-campus and the final year on-campus. The programme does not widen its offerings in any new degree programme; however, it introduces some new courses at the 'minor' level in Islamic Studies and Development Studies.

As from March 1983, the functional administrative unit of the programme has been elevated to the status of a centre. Through its own Board of Studies it is able to formulate its own strategies for the effective implementation of the programme and thus be able to control its academic destiny. According to the recommendations, the off-campus centre is to have it

own academic staff, but initially it is drawn from various schools of study. Currently 17 academicians are seconded for a period of one year both to write modules and to act as course managers. Another group is added to the first batch of seconders for the same purpose but for the courses of the higher level. Ultimately by the end of the first cycle of the programme (five years) it is hoped that the centre will have 61 staff of its own. Besides the academic staff the centre will have 2 educational technologists, 2 media specialists and a few additions to the administrative officers.

Plans have been drawn to improve the regional teaching and learning activities. In the plan it is proposed that a two-tier regional centre system be established to replace the existing regional centres which are located at selected secondary schools and teacher-training colleges. This system will take the form of:

- a. Permanent regional centre complexes where tutorials, lectures and laboratory work will be held. It will be manned by permanent staff, consisting of a coordinator and several tutors, and equipped with its own library, laboratories and lecture rooms.
- b. Study centres at smaller towns where learning activities can be held and monitored by tutors from the regional centres.

Although there is a proposal to introduce permanent teaching staff at the regional centre, it is envisaged that a very large proportion of the teaching will still be handled by part-time tutors/lecturers.

Other features of the programme will remain the same, but somewhat modified. The Orientation Programme for the new intake is still felt necessary to be held at the university campus and for a longer duration in order to make it more effective. Students will be briefed on techniques of learning and introduction to courses offered, the use of libraries and other reference materials etc. The three-week Intensive Course will gradually be phased out stage by stage depending on the effectiveness of the modules as indicated by students' pre-intensive course assessment and also based on students' and lecturers' requests. However science laboratory work would be increased during this period. The visits by lecturers will be relooked at and if necessary this programme be scrapped or modified. The materials provided to the students will be basically in print form, but the use of non-print materials, especially in audio materials will be part and parcel of the course package.

Strategies for Development

Development in Learning Materials: This has been very much emphasised in the new development, and therefore the change from 'lecture notes' to 'modules' can be considered very significant. The module is a relatively self-contained piece of self-instructional learning material with most courses containing 3-4 modules. Audio-cassettes and slides will eventually be included in this package of learning materials.

Lecturers seconded from other schools are currently preparing the modules. The change means a direction towards new knowledge and craftsmanship, and concomitantly needs new thinking and training. A one-month intensive course has been arranged to train the lecturers assigned to prepare courses for the first stage of the newly revised curriculum. The impressions made by one of the experts suggests that a short workshop of this kind held at one's own campus is far from satisfactory.

The university authority resolved this by quickly adopting a better method of training. An intership programme of training at universities abroad has been finalised to include the training of six non-science lecturers at Deakin University and 4 science lecturers

at Murdoch under USM-AUIDP-aided scheme. This training will be continued for several years until the centre has its own specialist in module writing and with the help of a core of experienced staff would be able to conduct its own training.

Certain guidelines have been established in order to ensure that these training schemes would meet their objectives.

- a. The internship training should first of all be broad-based, offering trainees a wider vision of distance education rather than simple techniques of writing; and secondly that such training opportunities should be reserved for those who have a relatively long-term commitment to off-campus work, and who will later play a role in the training of centre staff.
- b. That standards should be maintained and therefore as far as possible, on-the-job training should be desirable, where possible expert appraisals of the modules prepared should be made available.
- c. A core of preferably senior members of staff be formed to play the role of motivating the new comers to off-campus in formulating suitable modules for the local off-campus situations.
- d. continuous exchange of views should be a constant activity at the post-training stage.

Since not all module writers would be sent abroad within a given period of time, it is therefore necessary to think of a modest training scheme for the rest of the module writers. Such training would be in the form of:

- i. On-the-job training: Some experienced writers would train new writers as they actually began efforts on their writing. The training could be based on the modules already produced by senior writers, students' feedback, module writing manuals from other institutions, and open discussions with other writers and course managers.
- ii. Workshops can also be conducted at different writing stages, such as the beginning and at the middle of the writing period (minimum one year), if the number of newly assigned lecturers is large enough. Some senior writers, lecturers from abroad can become the instructors.
- iii. Taking the opportunity of the existence of Intensive Course, week-end tutorials and lecturers, visits, testing sample lessons would be easy to arrange. A form of discussions on evaluation techniques would be useful before this activity could be carried out. it may be done separately or may be built in as part of the internship or workshop.

Training in the Use of Audiovisual Materials

The use of audio-cassettes has so far been confined to a few courses. The Report has suggested that the use of audio-cassettes and other materials be increased. Some training for many of the module writers is necessary. This can be done with the help of the Educational Technology Unit. The following guidelines will be emphasised in the training:

- a. that the materials produced must be well thought of as part and parcel of teaching materials.

- b. that it should be a supplement to the printed materials or other teaching materials (slides, maps, etc.)
- c. audio-tutorial tapes should be encouraged,
- d. it should be innovative in presentation,
- e. it should be accompanied with evaluation slips.

Production Strategies

In order to produce good teaching materials it is desirable that the production should go through some form of "course team" process, including editing and evaluative filtration. The Centre has thought of a production system which seems to be suitable in a situation where one lecturer is responsible for developing his own course. In this system each module has to pass through the Course Team where suggestions for revision in terms of its language and style, illustrations and approaches are made. But at present this cannot materialise for various reasons, viz:

- i. absence of full-time academic staff, such as the educational technologist or course designer, to plan and supervise the course production process,
- ii. the editor has no training to carry out the appropriate tasks of an editor in module production,
- iii. there is inadequate number of graphic artists to meet the heavy demand for illustrations etc.,
- iv. inadequate academic and administrative personnel to handle the increasing workload and expectations.

For the present it is therefore felt that the system has to be contented with a simple mode of production. In this method the lecturers are left to prepare their own modules and submit drafts to the editors for comments on grammar and style; after corrections are made these are sent for final typing and printing. However, since the modules will have to be used for at least five years the following steps will be taken in order to guarantee quality.

- i. the modules will be submitted to a second reader for comments and suggestions for improvement,
- ii. evaluation sheets will be distributed to students and the feedback will become the lecturer's guide for immediate revisions,
- iii. some monetary incentive will be given to those whose modules have reached the required standard.

Staff Development:

Module Writers & Academics

For many years to come the Centre will still have to depend on seconded academic staff. Problems that come along with this type of staffing arrangement are multifarious and real. One is that of attitude. Elevating the Unit, which has all along been considered by many as an "unwanted baby", to the state of a Centre does not automatically create an instant cure. To find a group of truly interested academics for the job of writing modules

(although in the past some have involved themselves in preparing lecture notes), is really difficult. The internship abroad, which has been mentioned earlier, however does seem to be an attraction, and the same too with the promise of seeing the modules to be published for public consumption. Academics are also concerned about their being detached from their conventional teaching experiences, research facilities and progress which are wholly based and related to schools, and delineation of job assessment by different heads.

Although there is a plan to train new staff and to allocate the ASTS returnees to the Off-Campus programme, there seems to be other problems in this type of staffing arrangement. New staff, especially those without any teaching experience before, has to be given wholly anew in all aspects of techniques of distance teaching. Production and effective teaching would be much slower and management of courses might become less effective, for problems in distance teaching are less seen and therefore might be more difficult to be envisaged by new lecturers. Furthermore, as courses offered by off-campus should necessarily be equivalent, though not similar, the weight for equivalence is difficult to be estimated without first-hand experience of what the on-campus courses are like.

The short experience in implementing the newly revised curriculum has provided the Centre with utmost concern for staffing problems and we feel that suggestions below might become the strategies for the immediate future:

1. A few senior seconded staff, with some incentives, can be attracted to stay to act as coordinators of course development. A period of about 3 years would be manageable,
2. Those with research interest in aspects of distance education can be retained for a much longer period,
3. Lecturers who are still serving the schools but who are tipped to teach for off-campus in the coming year, should be given some involvement in writing modules with the experienced lecturers from category 1 and 2 above.
4. New recruitment should be assigned duties of writing and managing courses together with consultations of a more experienced staff.
5. Writing for off-campus and teaching for on campus can be done simultaneously by a team of two or three lecturers.
6. Discourses of a productive nature should continue between deans, centre directors, academics of off and on campus academic programmes.
7. Research projects and other kinds of activities involving both the on campus and off campus academics should be encouraged.
8. The status of the Centre can be further enhanced by giving responsibilities in conducting postgraduate training through course-work where possible.

Staff at the Regional Centres

The proposed setting up of the regional centre complexes have been temporarily shelved because of the current economic recession. This provides the Centre with the opportunity to review the proposed establishment of regional study centres. Our main questions to the need are basically - is it cost-effective? - will the centre be fully utilised? - what are students' real need within their time limitations? - will such complexes improve learning activities? - and which group and of what minimum number need such

establishment the most? Until such questions are answered the recommendations should not be hurriedly implemented. The Centre has plans to embark on a pilot project with the objectives of examining the potential utilisation and usefulness of such regional centre, in concrete terms.

In view of the existing situations the programme will continue to depend very much on the services of the temporary lecturers. The situation being so, some form of training will be arranged in order to guarantee that the teaching process can be of maximum benefit to the students. Short workshops which have been conducted these past years can be continued:

a. Workshops for the Residential Tutors. Residential tutors are part-time liaising personnel appointed among the residential tutors and they are normally senior science teachers of schools/colleges where week-end activities are conducted. They help to coordinate activities at the regional centres and liaise with the Centre for Off-Campus Programme in the administrative aspect. Periodically workshops are held for them at the campus to review the difficulties in teaching and administering the students at the regional level. Matters of counseling, curriculum and teaching methodology are also dealt with.

b. Workshops for the Regional Tutors. Selected tutors or part-time lecturers/lecturers at the regional centres are also invited to attend the above workshop. Emphasis is however on getting feedback on problems of teaching and finding the best approach of tackling such problems. Aspects of teaching are discussed in the context of the students' capabilities and shortcomings.

The Centre at present feels that such workshops can be continued and expanded and for purposes of obtaining better results the following features and objectives can be included.

- a. that the workshops be held at the Regional Centre itself where problems might be unique to its own environment and student composition.
- b. that it will include, to a large extent, academic counseling which, so far have been neglected at the regional level.
- c. where possible, for example in the case of teaching Science Foundation courses, (equivalent to the Higher School Certificate syllabus) schools/colleges and the Centre should cooperate closely,
- d. that it should explore the possibility of giving the services of the part-time lecturers to develop self-instructional teaching materials to support the modules,
- e. that the experiences gained at one regional centre be shared by others during other workshops.
- f. workshops should also be designed for librarians and laboratory assistants.

Aspects of Course Management

The statements and proposals discussed above are principally connected with course management. While the Centre's expectations from the part-time lecturers are high, the Centre admittedly have given very little consideration in giving training or special retooling for their teaching staff in the teaching of off-campus students. This is partly because of history wherein the on-campus and off-campus lecturers are indeed the same persons; with it comes the assumption that their problems are basically the same and that given the appropriate self-instructional materials students may be able to tackle their learning problems. The Centre is well aware of this fallacy, but without the right staffing system and enough teaching experience on the part of lecturers and lack of research, any undertaking to

institute the training programme for course management would be of little value under the current situation characterized by shortage of staff and expertise.

Development of Curriculum for Off-Campus Studies

The Centre does not have its own courses in the true sense of the word. Courses offered are selected from the lists of courses offered by the various schools. This has to be so owing to the fact that students at the final stage of their learning have to follow on campus courses, and therefore there should be continuity and consistency in the development of their academic career. With this principle set, ad-hoc committees for the curriculum at various school levels were formed to select relevant courses to meet the degree requirements at various levels of study. Academics from schools were identified to work out course objectives and outline of its content and the details of its syllabus. The Centre works out course packaging and the scheduling of studies according to Parts and Levels based on the principle that students can only choose their majors and minors at the third year of their studies. The curricula and syllabis are finally tabled for approval at the school Boards of study and the Senate.

Such a system checks the possibility of the Centre deviating widely from the on-campus curriculum--a real concern among the majority of the academics--but on the other hand reflects little adherence to the philosophy of equivalence which has all along been the aim of the new development. It will nonetheless become the trend for at least the first cycle during which time the attitudes of the deans remain assertive towards the supremacy of the conventional educational system. At the same time the Centre still depends very much on the services of the schools' staff. Although the Centre has to be contented with this type of arrangement, the Board of Off-Campus Studies will seek ways and means to ensure that there would be smooth operations in the process of production of modules.

Other Factors

The success of the programme depends very much on the efficiency of the administrative officers and the general staff. Plans have been made to expose the administrative officers to systems of operation in Australia. The production of modules require the use of word-processors and thus a new expertise and a new kind of arrangement is needed. The programme also plans to have its own printing unit to overcome the inability of the Central Printing Unit to meet datelines. Editors and graphic artists have to be trained to attain a high level of professionalism which is appropriate to the production of self-instructional materials. The Centre continues to improve its operation within its staffing constraints in order to meet its objectives, while at the same time tries to offer fringe benefits to on-campus undergraduates.

Conclusion

There has been a keener interest on the part of the general public and a few academics on the potentialities of the Off-Campus Academic programme in helping to produce graduates in line with the manpower needs of the country. While the government's policy of retaining the current rate of output of graduates can be appreciated as a logical means of maintaining economic and political stability, it is at the same time limiting the opportunity

for the off-campus programme to play its basic role in producing graduates economically. With the present low student intake change in the system of operation will certainly increase its cost per student, which would result in the critics refuting the advantage of the system for a country like Malaysia. The champions of distance education in Malaysia are at the moment still plodding their difficult path of making their contributions felt and appreciated in the proper light.



INDIA'S EXPERIMENT IN OPEN HIGHER EDUCATION: A STUDY OF ANDHRA PRADESH OPEN UNIVERSITY *

The distance education is assuming increasing importance in India. While the concept and practice existed in one form or the other for a long time, it is acquiring a new role and place in the educational philosophy in the recent past. In developing countries like India with its huge population and limited resources, making education accessible to all the citizens has become difficult. The conventional education has become costly and time consuming. It is also elitistic in nature, in a sense it is accessible only to the upper and middle classes in the society. In spite of the fact that the formal educational system in India is now a gigantic enterprise with about 7,000,000 institutions, 3.5 million teachers, 100 million students and an annual expenditure of more than Rs. 25,000 million, it is a sad comment that about 70 per cent of the Indian people remain virtually untouched by the present system of education.¹ In this situation the question is being raised whether the present education system can cope with the changing needs and demands of a developing society. It is in this context, the distance education becomes important and relevant. This has become possible mainly due to the major break-throughs in communication technology.

Although the needs and demands of the community coupled with technological advancement created the necessary conditions for a new break-through in the field of education, the overall environment, the stranglehold of conventional formal education and the existing management models pose formidable challenges to any new experiment. This calls for critical examination of the experiment, so that the difficulties can be circumvented and innovation invigorated.

The present paper mainly seeks to examine the Indian experimentation with Open Higher Education with special reference to Andhra Pradesh Open University which is started in one of the Southern States of India. It is the first of its kind in the country. The University has been working for more than a year. It has introduced a number of courses. In the first year (1983-84) the enrolment in undergraduate programme is around 7,000. The enrolment for this year's (1984-85) undergraduate courses is around 15,000, which indicates the increasing credibility and popularity of the system.

Evolution of Distance Education System in India

A brief discussion on the evolution of distance education is necessary to appreciate the importance of the decision to launch the Andhra Pradesh Open University in 1982. Broadly there are three phases in the evolution of distance education in India i.e., external examinations, correspondence courses, and Open University.²

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The advent of independence raised new hopes and aspirations among the Indian people. This gave rise to tremendous pressure on the system. Special efforts were required to be made not only to provide educational opportunities to the school going children but to a large number of drop-outs and others who had no access to education in the early part of their life. As a result a number of universities launched non-formal channels which include external examination programme. It was the earliest form of non-formal higher education, and even today a large number of universities continue this system. Under this programme, it is pointed out that "the University permits students to appear for examination and acquire degrees without assuming any responsibility in respect of teaching or supervision of their studies. The students availing this opportunity are absolutely on their own, although some of them may take the help of private tutorial colleges. This system is considered as not of much use as it has not taken any positive responsibility for education.

The second stage in the evolution of distance education is the starting of correspondence courses. These courses are different from the external examination. Under these courses the student is not only given study material but in some cases a short term contact programme where some teaching is also provided. These courses were started based on the recommendation of Kothari Commission on education, (1962-64). The universities, to play a positive and active role in non-formal education were expected to start correspondence courses. The courses were commenced in the early sixties, the first being the University of Delhi in 1962. In the whole country there are now 24 universities and 12 other institutions offering correspondence courses. Most of them are offering undergraduate programmes in liberal arts subject. A few of them are offering Post Graduate Programmes in arts, commerce and science subjects. A few others are offering career oriented diploma and certificate courses like diplomas in Banking, labour laws, personnel management, marketing management, material management, tourism and hotel management etc.

There were about 120,000 persons enrolled for these correspondence courses during the 1980-81, against 2,500,000 for the regular courses. While some Universities like Madhurai Kamaraj enrolled as many as 65,000 others like Meerut, Udaipur and Allahabad have only a few hundreds each. Despite the growth not much progress has been made to achieve the target of having at least one third of the student population in this sector by 1986 as was envisaged by the Education Commission in the mid 60's.

The basic flaw in the correspondence institutions has been the absence of freedom in designing and executing the courses. The stranglehold of the formal system has been so suffocating that no innovative thinking has been possible in these institutions. On the contrary these institutes became the dumping grounds for the formal system as in most of the cases the unwanted and not very competent teachers were deputed or recruited to these institutes. The staff working in these institutes have come to suffer from a feeling of inferiority and could not give their best to the system. At this juncture the establishment of full fledged Open University in Andhra Pradesh has been conceived. This can be considered a landmark in the evolution of distance education in India.

The Genesis of Andhra Pradesh Open University

In India the efforts for starting a fullfledged Open University goes back to the year 1976. In that year the Government of India appointed an expert committee under the Chairmanship of G. Parthasarathi to examine the feasibility of establishing a National Open University. The committee which submitted its report in 1976 strongly recommended the starting of a National Open University.³ The committee's report was accepted and draft bill was also prepared. The matter is still pending at this stage. It is not known why it was not

pursued. Recently Union Education Minister announced the intention of the Central Government to start a National Open University in this year.

The efforts made for starting an Open University in Andhra Pradesh go back to 1978. The then Education Minister showed some interest in Open University system and requested G. Ram Reddy, the then Vice-Chancellor of Osmania University who was going to U.K. to submit a note on the British Open University, and its relevance to India. Realising that the Government was not pursuing the idea, G. Ram Reddy himself took initiative to start the Open Education College under the Osmania University, to take the sole responsibility for the promotion of distance education. At the request of the University Mr. Greville Rumble of the British Open University prepared a consultancy report and all the preparations for launching of Open Education College were made. It was at this stage that a change in the state's ministry took place and the Education Minister Bhavanam Venkatram became the Chief Minister. He showed the renewed interest in the concept of "Open University" and appointed a committee under the Chairmanship of G. Ram Reddy with the stipulation that it should submit its report within two months of its appointment.

The committee consisted of reputed academicians and educational administrators. The committee did a commendable job of preparing a report which spelt out the objectives of the university, along with a detailed blue-print regarding the organisational structure of the university and its finances.⁴ The work was completed within the stipulated period of two months and the report was submitted in August 1982. The Government promptly accepted the report and a bill was prepared immediately and introduced in the legislature within a week of submitting the report to the Government. It was passed in the lower house on 24th of August, 1982 and was approved by the upper house the next day and the university was inaugurated on 26th of August, 1982 by the President of India. Though Democracy is considered a slow process of governance, this decision reveals that the process can be speeded up, if there is political will. That is how the Open University came into existence. If an analogy is to be drawn: as Harold Wilson provided the political support and Jenne Lee did the spade-work for starting of the British Open University, Bhavanam Venkatram (the then Chief Minister of Andhra Pradesh) provided the political support and G. Ram Reddy did the spade-work for starting the first Open University in the country i.e., Andhra Pradesh Open University.⁵ Though there was a change in Government in 1983 the New Government headed by N.T. Rama Rao gave full support to New University.

The concept of Open University seems to be catching up fast in India. The University Grants Commission has openly acknowledged the potentialities of the experiment. In addition to the national government's proposal to start a National Open University, many State Governments like West Bengal, Maharashtra, Bihar, Orissa are showing keen interest in starting Open Universities.

The Organisational Structure of APOU

The University, like any other University in the country has been created by an Act of the legislature which broadly sets forth its objectives and the organisational structure. The objectives of the Open University are:⁶

- a) to provide educational opportunities to those students who could not be accommodated in the institutions of higher learning due to impoverished socio-economic backgrounds and other limitations;

- b) to realise equality of educational opportunities for higher education for a large segment of the population including those in employment, women including housewives and adults, who wish to upgrade their education or acquire knowledge and studies in various fields through the print-medium (correspondence course), contact programmes, study centres and mass-media;
- c) to provide flexibility with regard to eligibility for enrolment, age of entry, choice of courses, methods of learning, conduct of examinations and operation of the programmes;
- d) complementary to the programmes of the existing Universities in the State in the field of higher learning so as to maintain the highest standards on par with the best Universities in the country;
- e) to promote integration within the State through its policies and programmes;
- f) to offer degree courses and non-degree certificate courses for those who wish to enrich their lives by studying subjects of cultural and aesthetic values;
- g) to make provision for research and for the advancement and dissemination of knowledge.

The Organisation Structure, though innovative in a few respects, in many other respects it is similar to that of conventional universities in the State. The head of the university is Chancellor who is the Governor of the State. He has the general powers of supervision over the university. The chief executive of the University is the Vice-Chancellor who is appointed for a period of three years and eligible for a second term. The Vice-Chancellor is both academic and administrative head of the university. There is a provision for appointment of Directors whose rank is equivalent to that of Pro-Vice-Chancellor. At present there are two Directors, one incharge of Administration and another Academic. They are expected to help the Vice-Chancellor in the effective supervision and coordination of the activities of their respective areas. They exercise the delegated functions i.e., the functions delegated by the chief executive. In addition there is a Registrar who is incharge of the office and a Finance Officer to look after the finances of the University.

The policy making bodies include the Executive Council, the Planning Board, the Finance Committee and the Faculties. The Executive Council consists of three types of members -a) ex-officio, b) nominated and c) elected. The ex-officio members include the Vice-Chancellor, the Directors, the Education Secretary, the Finance Secretary and the Director of Higher Education. The nominated members consist of one member of Parliament, three Vice-Chancellors of the universities in the state and five other persons nominated by the Chancellor. The elected members include three persons from the legislative assembly and two from the legislative council elected by the respective bodies. The executive council occupies a key place in the university administration. All the executive authority is vested in the Executive Council, and the Vice-Chancellor and other functionaries are accountable to the Executive Council.

The Planning Board is the supreme Academic Body of the University, which is concerned with all the academic matters. It has a large number of members who represent different academic disciplines and interests. In this body provision is made for representation of teachers and students. The Finance Committee examines the annual accounts and the budget of the university and reviews its financial position from time to time. It makes recommendations to the executive council in matters involving expenditure.

The Faculty is yet another important academic decision making body of the university. Each faculty consists of the disciplines assignable to it and headed by a Dean. External experts are also associated as members of the Faculty. The Faculty is broadly responsible for the formulation of academic programmes relating to the disciplines of that Faculty. For each discipline an ad-hoc panel of experts is constituted to help the Faculty in formulating the academic programmes. Though the university Act provides for the creation of the departments, the current thinking of the university authorities is to avoid the departmental structures in the academic organisation of Open University. The experience of the formal institutions shows that the departmental structures lead to rigidities creating artificial barriers in the learning process. The departmental structures do not generally permit emergence of inter-disciplinary courses. Such courses are lost in the inter-departmental rivalries and empire building attitudes and approaches. In view of these factors the university proposes to do away with the departmental structures. Instead the course team - consisting of university faculty and external experts - is constituted. This is an innovative dimension of the academic administration of Open University. It is responsible for preparation of the course material. The Faculty and the Dean are expected to provide the necessary guidance and supervision to the academic programmes of all the disciplines under that faculty.

Another innovative aspect of the organisational structure is the creation of Study Centres. They are the nerve centres of the University. The university reaches the student through these study centres. A net work of study centres are established throughout the state to provide continuous and closer attention to the needs of students. At present there are 30 study centres all over the state - one study centre in each district and eight in the twin cities of Hyderabad and Secunderabad. The Study Centre is located in an existing college and works on certain days in a week in the evenings and also on Sundays. The Centres mostly use the available infrastructure of existing colleges during the idle time, making best use of the available national resources.

There are part-time counsellors drawn mostly from among the lectures working in the districts concerned. The main functions of the Counsellors include guidance to the students, clarifying the doubts of the students in the subjects concerned, and explaining the programmes broadcast on the Radio and shown on the Video. Their work is supervised by a full-time Coordinator - a key functionary at that level. In certain centres where the student strength is low, the Coordinators are also drawn on part-time basis. The coordinator is provided with Secretarial assistance.

To give intensive coaching in the subjects, contact workshops are also organised twice a year. There are usually organised in the months of December/January and May/June. There is also a provision for arranging talks by the experts from outside the university. At the head quarters a Study Centre Branch, with a Professor as incharge, is created to continuously guide and supervise working of the Study Centres. Thus Study Centres provide opportunities for face-to-face interaction which stimulates the learning process.⁷

The Aape is Innovation

The APOU did make some innovations in the areas of course structure, learning techniques and selection of students. Here a brief account of these innovations is presented.

The effectiveness of any university is largely determined by the nature and content of its courses. The report of the committee on the establishment of an Open University rightly

observes: "the quality of an educational system is dependent to a large extent on its inputs especially of educational curricula and content of courses". It further says that "an outstanding feature of the proposed Open University should be its openness to ideas and its readiness to innovate and experiment". Keeping these broad objectives the university tried to design its undergraduate programme which includes B.A., B.Com., and B.Sc., for the academic year 1983-84.

The distinguishing features of the Undergraduate courses are:

- a) General Foundation Courses, Common and Compulsory to all students;
- b) Flexibility in the choice of Courses
- c) Vocationalisation of Courses; and
- d) Social Orientation of Curricula.

The duration of each Undergraduate Course is three years. No formal qualifications are necessary for joining the B.A. and B.Com, Courses; the only condition laid down is that one must have completed 20 years. The age criteria is laid down mainly on the assumption that a higher level of maturity, which is partially associated with age, is necessary for the students of distance education. Those who seek admission and do not possess any formal qualification have to pass the eligibility test conducted by the University. The purpose of the test is to assess the level of competence of the candidates. However those who have already passed the Intermediate examination do not need to take the test and are directly admitted to the courses. In case of B.Sc. only Intermediate passed students with science subjects are admitted. Here it is assumed that the students without some grounding in science would not be able to cope with the B.Sc. courses.

The Undergraduate courses consist of three levels; foundation courses, core courses and specialisation or applied courses. In the first year four foundation courses are offered which are common and compulsory to all the students. In the second and third year the student has to study six optional courses each year. The main feature of this course system is its tremendous flexibility with regard to the choice of optionals. The student is given considerable freedom to choose the optionals. The courses are planned by expert committees. The course material is prepared by a course team consisting of subject editor, a few course writers, a language editor and a coordinator. The members of the team are drawn both from the university faculty and the outside experts. Attempts are made to draw the best available expertise from outside. It is the course team which plans the material preparation. The subject editor - an editing expert in that area - is entrusted with the task of editing the lessons prepared by the writers. The material, to put it in nutshell is a product of collective effort.

The multi-media approach is adopted in the learning process. In addition to the printed material, the audiovisual techniques are also used to impart education to the students. Lessons are broadcast on radio and telecast on video. The all India Radio has given time for broadcasting the lessons. Although the University plans to take advantage of television, it could not do at the moment because of restricted coverage of the area by the Television. With the launching of INSAT-B Programme, the University envisages to use television extensively. Now the university is heavily depending on Video Cassette Recorders. Lessons are prepared on the Video Cassettes and supplied to all the Study Centres where video playback equipment is installed. The student can learn from these cassettes play also. Audio cassettes are also made available to the students at the study centres.

The Open University adopts a continuous evaluation system. The evaluation consists of two parts - response sheets and regular examinations. First there is a continuous assessment of the student by the counsellor. The students have to send the assignments to

their Counsellors. But there are no marks awarded to these assignments. The main purpose of these assignments is to help the students in assessing their progress. Secondly, there is a regular examination at the end of the year conducted by the University at different study centres. The university proposes to introduce as much of flexibility as possible in the conducting of examinations.

Courses Offered

As mentioned earlier the university is presently offering three undergraduate courses - B.A., B.Com., and B.Sc. Under these programmes around 21,000 students got enrolled in First and Second years. The composition of the students of Open University indicates that most of the students are in the age group of 25 to 35 years. A sizable section of the students (nearly 25 per cent) are women; most of whom are house wives. Occupation wise a large number of the students are white collar workers. The observational analysis reveals that these students exhibit higher degree of maturity and motivation.

From the academic year 1984-85 the university proposes to start Post-Graduate Diplomas in Public Accounting, Public Relations and a Graduate Course in Library and Information Sciences. These three courses are professional courses. The initiative for these courses came from the respective professional bodies. The Accountant-General, Society for Public Relations and the A.P. Library Science Association are closely associated with designing and development of these courses. In the formal universities this type of collaboration between the professional bodies and university departments is difficult to achieve. The university also proposes to start a few post-graduate programmes in arts, commerce and science from the next academic year. The community education programmes, Industrial Relations, Home Management, Family Welfare, Adult Education, Farm Management, are some other courses under the consideration of the University.

Conclusion

The Andhra Pradesh Open University - a bold venture in India's Open Higher Education system - is the first university to take distance education beyond the correspondence courses. It raised the overall status and importance of open education. More freedom and flexibility has been ensured and exercised in course design and curriculum development. The departmental and other structural rigidities that are found in the formal institutions have been largely loosened. The University is able to strike better interaction with the professional bodies in curriculum development. Keeping in view the social and professional requirements, the interdisciplinary courses are designed with the help of experts belonging to different disciplines and professionals associated with the practice. The concept of course team did help in breaking the age-old barriers between different academic disciplines and also between the academics and practitioners. The system not only facilitated collective effort but better utilisation of talent and expertise. The best available expertise is tapped for benefit of a large community of students. The national expertise usually confined to the metropolitan centres is taken to the doorsteps of rural students spread all over the state. With the help of modern mass media, the students and teachers batch after batch are exposed to the best minds available not only in India but even outside the country.

In making education socially relevant, the university can claim some advancement. The foundation courses are so designed that they not only impart awareness to the students about the achievements of humanity in the past but also sensitise him to his social

environment and contemporary problems. The courses have not only been well received by the Open University students; the course material is in great demand from the students of formal institutions, candidates taking competitive examinations and serious minded members of the community. It testifies to the claims of the distance education system that it not only caters to the needs of its students but serves the general educational needs of the society at large.



Reference

1. Citizens for Democracy, Education for Our People; A Policy Frame for the Development of Education (1978-87) Bombay, Allied publishers, 1978, E.1.
2. For a more detailed discussion see G. Ram Reddy, Open Education System in India. Its Place and Potential, Hyderabad, Andhra Pradesh Open University, 1984.
3. Government of India, Ministry of Education and Social Welfare, Report of the Working Group on Open University, (Popularly known as G. Parth sarathy Committee) 1976.
4. Government of Andhra Pradesh, Towards an Open Learning system, Report of the Committee on the Establishment of an Open University, 1982.
5. Prof. G. Ram Reddy is appointed as the first Vice-Chancellor of Andhra Pradesh Open University in November, 1982.
6. Government of Andhra Pradesh, Andhra Pradesh Open University Act, 1982.
7. For more details see G. Ram Reddy, Open Educaiton System in India; Its Place and Potential. op. cit.

PLENARY SESSION III:
Dichotomy of Equity and
Quality

*Main Paper***THE DICHOTOMY BETWEEN EQUITY AND QUALITY*****Introduction**

This paper aims to discuss mainly the concept and operation of Ramkhamhaeng University, rather than the broader concept and operation of a distance teaching university. Ramkhamhaeng University is an open admissions university or an academic market university. The term "academic market" was Thai-invented to mean a place where anyone who longs for knowledge can go to and pay for what is offered. It also implies that class attendance is nonobligatory as opposed to what is usually required in conventional universities in Thailand. Ramkhamhaeng University adopted the open admissions policy and has provided equality of educational opportunity by admitting anyone with a high school certificate or equivalent, or a class 2 civil servant with a junior high school certificate without taking an entrance examination. The academic market concept was taken from the University of Moral and Political Science (now Thammasat University) which was established as an academic market university in 1934 but discontinued its open education policy and was turned into a conventional university in 1960. Many Thais appreciated the open education system introduced by the late Pridi Panomyong, the former Prime Minister of Thailand and statesman whose statue was unveiled recently on the occasion of the 50th Anniversary of Thammasat University on June 27, 1984.

When the idea of establishing Ramkhamhaeng University as a new academic market university based on social demand was conceived in the Parliament of Thailand in 1969, many newspapers, journals and a few scholars were skeptical and voiced their opinions against the new university. They were afraid that the university would be a sanctuary for gangsters, gamblers, drug traffickers and political activists. Doubts on quality of input (students) and output (graduates) as well as instructional media and techniques used in coping with a large number of students under an equal opportunity policy were raised. This paper attempts to demonstrate that the quality of the output is independent of the concept of equity which leads to a large enrollment.

Equity and Quality

The title of this paper seems to presuppose that quality and equity stand on opposite ends of a polarity, otherwise there should be no dichotomy between equity and quality. When a person is given the opportunity to be born in any society in the world, he should be given a privilege to an equal educational opportunity to suit his intelligence and capability. It is the duty of the society to provide him with an educational opportunity that every free citizen is entitled to receive. We find that all primary education is compulsory and free, secondary education is compulsory to a certain extent and free in certain countries and not free in others. Tertiary education is mostly voluntary, not free and somewhat limited to a certain group of people who can afford the high price of tertiary education. This paper will emphasize three important aspects of open higher education for the masses as follows:

- (1) Open higher education aims to provide equal opportunity to the "less fortunate" (Duke, 1978: 4). It has been stated that "the major objective of the Open University is to

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offer opportunities to educationally under-privileged groups" (Pratt, 1971). Some have suggested that the Open University aims "to mitigate social inequality" (Burgess, 1972) but some have felt that "What it (the Open University) is able to do is to provide a genuine 'second chance' for all those who, for one reason or another, failed to get a first chance at a university education" (van der Eytern, 1974: 29).

(2) Open higher education must not claim cost-effectiveness and cost efficiency. Wagner (1972:159-193, 1974: 21, and 1977:364) indicated that the unit cost per student at the Open University in the United Kingdom was about a third of that of conventional universities and that the unit cost per graduate was about a half that of the conventional universities in the United Kingdom. Collister et al (1980), however, showed that the unit cost per student at Allama Iqbal Open University in Pakistan is somewhat equivalent to that of the conventional universities in Pakistan. Rumble and Harry (1982: 239-240) claimed that distance teaching universities "are more cost efficient than conventional universities operating in the same country (e.g. the Open University, United Kingdom)", or "have the potential to be so (e.g. Athabasca University, Edmonton, Alberta, Canada, Universidad Estatal a Distancia, San Jose, Costa Rica, Allama Iqbal Open University, Islamabad, Pakistan)" (Rumble and Harry, 1982:239). Even though these educationists have cited different examples in favor of distance teaching universities for cost-efficiency, but they seemed to overlook the fact that investment in distance teaching universities would be costly with new technologies (satellite broadcasting, cable television, audio and video cassettes, interactive computer terminals, and computer-controlled robots) included.

(3) Open higher education must not operate for profit as business enterprises. Nearly all higher education institutions around the world, conventional or nonconventional alike, are becoming profit making enterprises by changing high tuitions and fees. Open higher education institutions should be more humanistic and generous to those who seek a second chance for an equalization for educational opportunity and social equality, if they really aim to help the masses and to educate the less fortunate. It is interesting to find that Birnbaum (1974:37) considered open higher education "a secularized version of socialism." or "a form of socialism transposed or spiritualized."

Factors Affecting Quality of Graduates

The author will limit the discussion of this paper to the quality of the output (graduates) rather than the quality of instructional materials, methodology, curriculum, academicians, and administrators : involved with an open higher education system. The public always assesses the universities by the preformance and achievement of their graduates. It is not the duty of the universities to propagate that they produce excellent graduates. It seems that "Economic studies of distance teaching universities have tended to assume that the quality of assistance-taught graduate is the same as one from a conventional university" (Rumble and Harry, 1982:240). Turnstall (1974:XIII) indicated that "the Open University is following the pattern standard of all other British universities of appointing eminent academics from other universities to its examining boards, those academics have a decisive voice and ensure that the standards of all British degrees are roughly similar". Ramkhamhaeng University does not follow the British pattern but its thirteen year existence has proved to the public that it produces well-qualified graduates as Warotamasikkhadit and Leuschel (1979:101-102) stated:

"The University has to maintain high accademic standards in order to gain public acceptance. At present, Ramkhamhaeng is proving itself to the public and compares

favorably with older, more traditional universities in Thailand. At the beginning, the public had a rather low opinion of Ramkhamhaeng University since "anybody can be a student at Ramkhamhaeng" The performance of the first graduates has dispelled this negative attitude partly because of the proportion of students admitted to students graduates.

Table 1. Number of students admitted versus those graduated.

Year Admitted	No. of Admissions	Year Graduated	No. of Graduates
1971	35,205	1975	1,256
1972	8,726	1976	3,351
1973	12,645	1977	4,893
1974	22,289	1978	6,919
1975	23,311	1979	8,764
1976	41,569	1980	10,198
1977	55,938	1981	10,891
1978	85,311	1982	12,493
1979	117,049	1983	16,183
1980	103,273	1984	
1981	108,147	1985	
1982	98,982	1986	
1983	84,878	1987	
1984	87,820	1988	

There is no doubt that open higher education can achieve quality with equity, if the following factors are well measured.

(1) Institution philosophy. Any open higher education institution must have a clear concept that it wants to serve the masses and those who are less fortunate than the very few who are fortunate and able to pass the selective system of the university entrance examination or who are able to afford the high price tuition in private colleges. Every educationist should hear in mind that giving equal opportunity in tertiary education with low cost is noble. Education is not business in the author's view. It is a sin for a government supported university to make profit out of those poor students who are seeking a second chance for their higher education. Any administrator with a profit making idea in mind should be ashamed of himself.

(2) Government support. It is necessary that the government realize the importance and necessity of open higher education and give a strong support to such institutions. Since the existence of Ramkhamhaeng University in 1971, it has helped the Thai Government" solve some political problems and reduced some pressures because it guarantees that all high school graduates who seek admission to the University will be accepted (Warotamasikkhadit and Leuschel, 1978:103). The Thai Government should be grateful to Ramkhamhaeng University for helping to reduce public outcry for more rooms in the higher education system. In 1978 the Thai Government realized that Ramkhamhaeng had taken the big burden alone in accepting high school graduates who could not enter conventional universities and private colleges, Sukhothai Thammathirat Open University was established to help taking some students who are in the labor force. It was a great benefit to Ramkhamhaeng University that the Government has given us a helping hand.

Ramkhamhaeng University has never considered Sukhothai Thammathirat Open University a competitor as many seem to think, but considers it a sister university that shares the same problems and headaches. Since the establishment of Sukhothai Thammathirat Open University, enrollment at Ramkhamhaeng University has been less than what was expected because some choose to register at Sukhothai Thammathirat Open University. Ramkhamhaeng University is delighted to see Sukhothai Thammathirat grow and hopes that its enrollment will increase and also would like very much to see the day when the Government has students into two halves, Ramkhamhaeng University takes one half and Sukhothai Thammathirat Open University takes the other half. This can be only a dream because a true democratic country like Thailand would not allow such a thing to happen. The Government has been very generous in funding Ramkhamhaeng University since the beginning. In the recent year the Government funds allotted to Ramkhamhaeng University is about one half of the amount collected from tuitions (at 78 US cents per semester credit) and fees from students. Table 2 gives the University's budget in comparison with the Government fund.

Table 2. Ramkhamhaeng University budgets, 1971-1984

Year	Government Funds	University Funds
1971	US\$ 1,000,000	US\$ 1,000,000
1972	US\$ 1,208,775	US\$ 1,613,000
1973	US\$ 1,458,000	US\$ 1,420,000
1974	US\$ 1,968,500	US\$ 2,388,922
1975	US\$ 3,000,000	US\$ 3,123,915
1976	US\$ 3,090,900	US\$ 3,911,250
1977	US\$ 3,702,308	US\$ 5,253,800
1978	US\$ 4,021,594	US\$ 6,528,000
1979	US\$ 5,578,945	US\$ 8,693,000
1980	US\$ 5,469,335	US\$ 13,271,380
1981	US\$ 6,012,448	US\$ 13,447,391
1982	US\$ 5,800,622	US\$ 14,236,594
1983	US\$ 6,272,478	US\$ 15,117,826
1984	US\$ 6,402,491	US\$ 13,571,739

Certainly university administrators prefer more Government funds to expand, projects, to hire more university personnel, and to buy more and better equipment. If the present budget suffices, it is unnecessary to obtain more funds since the enrollment is decreasing. It is better to leave the money to the Government to support other ministries and high priority projects. If the second campus of Ramkhamhaeng University needs more Government funds, the Government will certainly allot a fair amount to support it. Budget increase may not directly lead to better quality of graduates but it may help indirectly.

(4) Curriculum development. It seems that curriculum must be constructed in accordance with distance teaching concept rather than classroom teaching concept because the majority of students at Ramkhamhaeng University choose to study at home, even though about 100,000 students out of 600,000 enrolled students attend classes daily to gain closer

teacher-student relationships through closed-circuit televisions and to have face-to-face teaching in small classrooms for certain classes. Ramkhamhaeng University administrators and faculty members in charge of curriculum development should frankly admit that their curriculums badly need reviewing and improvement to suit distance teaching objectives.

(5) Media Everyone knows that the most important teaching medium of open higher education is the printed text not radio broadcasting, television broadcasting, audio and video cassettes, or computer terminals. Printed materials are the cheapest of all. Thus the printed materials must be developed with high quality and students should be able to use the materials independently with the assistance of other media. Ramkhamhaeng University publishes 1226 titles yearly. Some of them are considered standard textbooks for other conventional universities as well.

(6) Faculty members. Faculty members in distance teaching institution must be innovative in their teaching methodology and techniques. They must be susceptible to educational innovation and fully believe in the mass higher education system and wipe away their previous experience in the selective higher education system. It is appropriate to mention "Lord Crawford in his 1969 inaugural address as Chancellor of the Open University (who) stated that it was open 'as to people'; 'as to places'; 'as to methods'; and finally 'to ideas' (Turnstall, 1974:X).

Conclusion

Ramkhamhaeng University is very proud to have ventured into distance teaching as well as closed-circuit television teaching and class-room teaching on the first campus since 1971. This year the second campus on the outer part of Bangkok has been added. Thai students certainly prefer the mixed system adopted by Ramkhamhaeng University to a system composed of only distance teaching. It may be true that the input of Ramkhamhaeng University may be less qualified than the selective system, but Ramkhamhaeng University has proved to the public that it produces an output with quality in parity with that of conventional universities. Questions have been raised by some educationists in Thailand that distance teaching may very well furnish students with academic knowledge in good quality but lack the value-added to the students as a result of their distance learning. Since Ramkhamhaeng University in both campuses operates on the premise that class attendance is not compulsory. Students may choose to attend classes and can be close to their friends and teachers to obtain the value-added, if they wish. Ramkhamhaeng University will carry on its unique program of distance teaching, closed circuit television teaching, and face-to-face teaching at the same time as long as the public prefer and appreciate its effort in serving the masses.



References

- Birnbaum, Norman (1974), 'A view from New England,' in **The Open University Opens**. Amherst: University of Massachusetts Press, pp. 34 - 43.
- Burgess, Tyrsell (1972), 'The Open University,' **New Society**.
- Collister, P. et al (1980), **Mid-term Review of ODA's Aid to Allaura Iqbal Open University, Pakistan**. London : Overseas Development Administration.
- Duke, Christ (1978), 'Open education in Australia,' in **Bulletin of the UNESCO Regional Office for Education in Asia and Oceania** 19, 1 - 14.
- Pratt, John (1971), 'Standards in higher education,' **Higher Education Review**.
- Rumble, Greville and Keith Harry (1982), **The Distance Teaching Universities**. New York: St. Martin's Press.
- Turnstall, Jererny, ed. (1974), **The Open University Opens**. Anherst: University of Massochusetts Press.
- Van der Eyken, Willem (1974), 'The seeds of radical change,' in **The Open University Opens**. Amherst: University of Massachusetts Press, pp. 28 - 33.
- Wagner, L. (1972), 'The economics of the Open University,' **Higher Education** 2, 159 - 183.
- _____ (1972), 'The economic implications,' in **The Open University Opens**. Amherst: University of Massachusetts Press. pp. 21 - 27.
- _____ (1977), 'The economics of the Open University revisited,' **Higher Education** 6, 359 - 381.
- Warotamasikkhadit, Udom and Donald A. Leuschel (1978) 'Open Education in Thailand,' **Bulletin of the UNESCO Regional Office for Education in Asia and Oceania** 19, 95 - 104.

Supporting Paper I

EQUITY AND QUALITY: MUST THERE BE A DICHOTOMY?

Introduction

All over the world, governments face the problem of growing educational demands and inadequate resources to meet them. Almost invariably they turn to open learning and use distance teaching as one means of bridging the gap between what is possible and what is necessary. In this they are right, because the potential of distance teaching to provide what traditional teaching methods cannot provide is great. But they also frequently introduce distance teaching systems - perhaps because similar ones have succeeded elsewhere - without an adequate analysis of how distance teaching can be fitted to their own particular conditions. In this they are wrong, because they are likely to fail where they might have succeeded, and they too often accept that there is an inevitable loss of quality in systems used for large numbers of students. It is this which leads to the belief that there is a dichotomy between equity and quality. It is the purpose of this paper to outline conditions which reduce - and ideally remove - the dichotomy.

Initial and Continuing Education

The first important distinction which we have to make, when thinking of using distance teaching methods, is that between initial and continuing education. All countries provide initial education by traditional means, and the need for using distance teaching arises from the difficulty of meeting the expanding needs of initial education by traditional means. Hence distance teaching is used here as an "add-on" provision, as I have explained more fully in my keynote address, and almost inevitably and invariably the more privileged people then receive their education in the traditional form, while the less privileged ones have to make do with being taught at a distance. The result is a serious decline in motivation to study among those taught at a distance, a motivation which in any event is difficult to maintain among youngsters. It is this which leads to the tension between equity and quality. Hence, if either secondary or tertiary education has to be provided in part through distance teaching, solely because the numbers are too large for all of it to be provided traditionally, then it would be fairer and almost certainly more efficient, if all students received part of their education traditionally and part at a distance. The situation is of course quite different if there are students who themselves have a reason for preferring to study at a distance or for whom it is the only possibility, since in that case their motivation is likely to be high. All this was indicated in the results of the experiment in which the Open University in Britain took in a group of 18-20 year olds. Their failure and drop-out rates turned out to be much higher than for adult students, but there was one exception to this - a sub-group of married women (Wooley and McIntosh 1980, section 7.2.3). For many of them distance learning was likely to be the only way to pursue a degree education. It is noteworthy that this particular research of the Open University seems to have been ignored by the new Turkish Open University, the main aim of which is "to allow would-be students who fail to win places at the University to

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benefit from higher education nevertheless" (Kennedy 1982). Furthermore, in spite of the fact that the Turkish OU is taking in school leavers while the British OU is for adult students, "open education in Turkey is being modelled after the British Open University, and similar teaching methods are to be employed". In view of what I have said earlier on, I shall naturally be very interested in the progress of the Turkish OU.

The situation is quite different in continuing education, where we are concerned with the up-grading and up-dating of professional knowledge and skills. Here the more immediate relevance of the courses and the possibility of professional advancement should provide adequate motivation to pursue the necessary study. It is nevertheless significant that when Britain turned with its Open Tech to distance teaching for technical and business training, where the majority of trainees would be rather young, the mode chosen was one in which distance and college teaching were closely integrated with each other. The result is again a better balance between equity and quality. A second consideration in continuing education concerns the difficulty and cost of releasing professional people from their jobs and often moving them from their homes in order to pursue in-service training. In many instances this is the most powerful reason for using distance teaching in continuing education, as is well recognised in industry and commerce. It is here too that the biggest effective saving arises from the use of distance teaching as opposed to traditional methods. Regrettably, this saving remains largely hidden, unless a sophisticated cost-benefit analysis is undertaken, which is rarely done. If at least part of the savings obtained in this way are directed into the training system, there will be less danger of reduced quality.

Conditions for Distance Learning

I have already referred to the necessity for a high degree of motivation among distance students, to overcome the loneliness of their work and the difficult circumstances under which they often conduct it. Frequently the circumstances could be improved through the use of some additional resources, which would make distance education a little more expensive than it would be otherwise, although still very much cheaper than traditional education. Unfortunately, these additional resources - for study centres, telephone tutoring, better study conditions at the work place, partial release from work, etc. - are rarely made available which, when one considers the very high drop-out rate in much of distance education, is surely a false economy. Such false economies are the enemy of both equity and quality. It may be noted that a high drop-out rate reduces the quality of achievement in a system, even if those who succeed in it are of the highest quality.

Motivation is not, however, enough. Students must also develop the abilities needed for self-study, for which they may have been ill prepared by earlier experiences of traditional teaching, since this is often authoritarian and designed to make students into passive receptors of knowledge. Similarly, teachers in distance education, whether course writers or tutors, have to acquire skills and attitudes which are quite significantly different from those to which they became accustomed in traditional teaching. It is therefore astonishing how few distance education systems actually provide a training for both teachers and students to enable them to work effectively in the system. I have even heard an experienced distance educator at a recent conference say that it is not necessary to provide a formal training for teachers in distance education.

This last statement is so surprising that it is worth analyzing further. It is of course true that there are at present a number of successful distance education systems which employ teachers who have not been trained. However, most of these systems are fairly new - as is the

whole movement of distance education as opposed to the now somewhat discredited traditional correspondence course - and the experience to provide a training simply did not exist ten years ago. Furthermore, as with many things new, the first to develop genuine distance education courses were dedicated enthusiasts. With the growth of distance education, it will now be increasingly necessary to recruit more 'normal' people as teachers. These should benefit from the experience of their predecessors and be able to treat distance teaching as an ordinary job for which they ought to expect to be trained.

The training of those who staff courses which use distance teaching should therefore be a major concern of all who are interested in the future well-being of distance education. One point to note here is that few teachers in distance education have had the experience of being students in distance education, which is a serious deficiency. It also indicates the obvious advantage of using distance teaching methods in order to train teachers in distance education. One such course, which is designed for the latter, has been developed at the University of Surrey, and I hope that I may, as a result of this conference, hear of others.

High or Low Technology

The question as to the most appropriate delivery system is not simple to answer. The criterion should be, as in all education, that it should lead to effective learning. Just as in the traditional lecture the teacher may 'cover' the syllabus, but the students may not, so in distance teaching a public broadcast may 'cover' a large number of potential students, yet lead to comparatively little learning. Thus the British Open University was initially called "the University of the Air", because it was thought that most of its teaching would be delivered via public broadcasting, but it soon became apparent that the material which really led to most of the learning, was printed matter delivered through the post. This is not to say that public broadcasting should not be used, merely that it should be used appropriately. The same is true of satellite communication which has been tried out, all too briefly and so far not very successfully in a number of developing countries. Its most recent and perhaps most hopeful use has been in the University of the South Pacific, as described by Kanapper (1982):

"The University of the South Pacific beams instruction by satellite from its main campus at Suva to associated centres scattered through the South Pacific. Communication is two-way, so that student and staff can talk to Suva and to the other centres. In the near future the satellite is expected to burn out, and it is unlikely that funds will be available for a replacement.

Interestingly, however, those involved with the programme believe that the network is now strong enough to be retained, using more conventional correspondence materials (textbooks, course guides, etc) supported by a network of local tutors and periodic visits from Suva staff."

Neither do I say that under appropriate circumstances, a sophisticated mix of high technology media may not be appropriate. A good example of the development of such a mix is given for instance by Kirman and Goldberg (1982), where an earlier and unsuccessful use of group telephone conferencing with hand-held telephones was successfully replaced by a mix of one-way television and loudspeaker operated group telephone conferencing. (Do not be misled by the title of the paper: satellites were the topic of instruction, not the delivery system.)

However, the real lesson to be learnt from the use of different forms of technology is that the educational quality of the learning materials is far more important than their mode of delivery. I should stress that the quality of production of the materials is almost as important

as their educational quality and cannot in fact be divorced from it. This means that what is required in the way of production for educational materials is quite different from what is required for entertainment and, in the case of TV and radio, cheaper. The opposite is true in the production of printed materials, where well produced materials tend to be somewhat more expensive than books.

The above arguments indicate that an appropriate choice in the delivery technology of materials requires a careful balancing of both educational and economic considerations. Unfortunately, it is sometimes other considerations which exert too strong an influence. They result from the policies of governments and funding agencies, and I have referred to this in my keynote address.

Conclusion

The purpose of this paper is to issue warnings in order to prevent failure, not to discourage success. There are indeed many successes (see eg. Daniel, J.S. et al 1982), but there are also failures (see eg. Paper 3 in the just quoted reference). In other words, nobody should be concerned with distance education, unless he is an optimist, but being an optimist does not preclude one from being a realist. For the optimist, a glass is half full when for the pessimist it is half empty. The realist will want to know the quality of what is in the glass, and if he is also an optimist, he will want that quality to be high. This is where I stand and why I believe that if we do not consider distance education to be a universal and cheap remedy, but use it appropriately, it can be a powerful aid to progress and can achieve quality with equity.



References

- Daniel, J.S. et al (eds) (1982), "Learning at a distance", Edmonton: Athabasca University.
- Kennedy, B. (1982), "The Turkish Open gets underway", Times Higher Educ. Sup., 31 December.
- Kirman, J.M. and Goldberg, J. (1982), "Distance education: Simultaneous one-way television and group telephone conferencing for satellite map instruction", Alberta J. Educ. Research 28, 51-57.
- Knapper, C. (1982), ". . . and my year away", Newsletter of the Teaching Resource Office, University of Waterloo, No. 14.
- Wooley, A. and McIntosh, N. (1980), "The door stood open", Lewes: The Falmer Press.

THE DEVELOPMENT OF EXPERIENTIAL LEARNING PROGRAMS FOR THE OPEN UNIVERSITY*

Experiential Learning is designed to translate into credit, experiences gained through work, training, and activities in society; all of which may contribute to the personal or professional growth of the individual. Over the past ten years it has become more and more common for colleges and universities to award undergraduate and graduate students academic credit for learning acquired prior to enrollment. The role of experiential learning in the Open University is clear. There are large numbers of adult learners who have had significant learning experiences outside the traditional classroom. Assessing these experiences and granting credit towards a degree is in keeping with the best philosophical interests of the Open University. This paper will present an academically viable model for the development of a system to evaluate experiential learning.

Background

The experiential learning movement has grown to include some 350 members in the Council for the Advanced of Experiential Learning (CAEL). This Columbia, Maryland based organization is dedicated to developing and promoting high quality experiential learning programs. These institutions recognize two main categories of experiential learning; sponsored and unsponsored. Sponsored learning occurs at an institution of higher education where the student is enrolled and where the learning activity is a recognized part of the student's academic program. Unsponsored learning recognizes experiences which a student has had prior to matriculation, and which are evaluated for academic credit after enrollment in a college or university. Open Universities are most interested in unsponsored experiential learning which usually includes the evaluation of a portfolio documenting, in an in-depth manner, job related learning, formal training, and personal experiences relevant to the degree being sought.

Difficulties

Experiential learning is diverse and individualized. The supervision of experiential learning varies from being totally independent, having been supervised under non-institutional auspices, or having been closely planned but under different circumstances than most classroom learning. Special safeguards are necessary since the assessment of prior learning comes after the learning has occurred. A great deal of responsibility is placed on the student for stating learning objectives.

Resolution

To resolve these difficulties, it is necessary for Open Universities to respond to the following obligations:

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1. develop a sensible rationale for the experiential learning that is consistent with the institution's mission, reasonable in relation to its resources, and useful to its intended clientele;
2. translate that rationale into workable policies, guidelines, and operating procedures that are made clearly known to all students and interested parties; and
3. insure that those policies, guidelines, and procedures are followed with reasonable fairness, consistency, and useful outcome.

A Model for Implementation

As part of the application procedure for entering an Open University, it will be important to include an experiential learning component. A portfolio model is proposed as one of the most comprehensive means of facilitating this process. Applicants for credit should be sent an Application for Experiential Learning Credit developed by an Experiential Learning Team appointed by the university. This application should include instructions and forms for recording each type of learning experience. It should contain the areas of job related learning, training experiences, and personal experiences. The student should then list work experiences, their dates, exact title of positions held, and names and addresses of employers. Each experience should require a brief written description of duties performed, of methods used to accomplish the duties, of achievements in the position, and of the learning acquired. The student should describe work experiences which demonstrate an ability to lead, develop, investigate, analyze, theorize, communicate, and problem-solve; and further, to present documentation which substantiates professed accomplishments. Representative documentation for work experiences could include letters of commendation, awards, evidence of promotion, samples of work produced, or explanations of ranking, rating, or classification systems.

Training experiences may include nonacademically accredited and nontransferable courses or programs of instruction completed. Such experiences could include courses or programs offered by governments, the military, private organizations, private companies, workshops, seminars and conferences. Documentation for these training experiences should include evidence of completion or attendance, copies of licenses or certification resulting from training sessions, and/or letters from the organizations or school. Students should also be asked to provide course descriptions and syllabi, as well as amounts and types of assignments required.

Personal experiences include areas other than work or training. These often include volunteer or civic work, special abilities developed by the student, knowledge acquired through ownership of a private enterprise, and publications or unpublished writings. All should be well documented.

Faculty Input

Experiential learning should be the province of a team of faculty members created under the auspices of the academic senate (or particular governing body) of the Open University wishing to implement this type of program. The team's charge is the development of the philosophical basis and the process mechanisms for evaluating and awarding experiential learning credit. This selected faculty team will ultimately evaluate student portfolios and make the actual award of academic credit. As portfolios are received by the university, they should be forwarded to individual experiential learning-team members. This team member scrutinizes each learning experience to ascertain responsibilities assumed,

contributions made, and results achieved. The student's documentation will be examined closely to insure that the stated learning experiences are supported.

Training

Before faculty members are authorized to grant experiential learning credit, they should undergo a training period in experiential learning assessment policy and practice. Actual portfolios must be read and analyzed. Materials dealing with non-traditional learners must be researched so that members are familiar with the state of the art in reference to Open Universities. Recommended credit awards by team members must be discussed and criticized. Thorough familiarity with qualitative and quantitative dimensions of evaluation will encourage consistency of awards among team members.

Award Guidelines

Open Universities awarding experiential learning credit must evaluate this learning in terms of the degree and area of concentration pursued by the individual student. Each degree has a set of areas of study in which students must demonstrate competence before fulfilling degree requirements, and experiential learning is one way in which competence in these areas of study may be demonstrated. Accordingly, many valid learning experiences, fully deserving credit, will not be applicable to a specific degree program. Students may earn credit for both unsponsored practical experiences and nonaccredited sponsored training or coursework. Both of these may include workrelated experiences and community or personal activities. For example, an individual may be evaluated in terms of his or her work as a personal administrator and for company-sponsored courses dealing with personnel relations. A Chamber of Commerce member could be evaluated in terms of his or her active leadership within the organization and/or for civically relevant courses taken in conjunction with the Chamber.

Work Experience Awards

The following is an example of how an Open University could equate the giving of traditional credit for practical on-the-job experiential learning by establishing a ratio of time involved to credit hour production:

18 to 24 months	= 1 credit hour
25 to 36 months	= 2 credit hours
37 to 60 months	= 3 credit hours
60 months or more	= 4 credit hours

These guidelines assume that work-related experiential learning usually demands more time, more intense involvement, and greater attention than nonvocational concerns. However, it must be noted that these guidelines would apply only for experiential learning considered college or university level and directly related to the nature of the degree. In order to be accredited, the experiential learning must be related to the content of the student's academic curriculum. In addition, intense and time-consuming assignments demand special consideration. For instance, a general accounting office auditor might need to develop specialized knowledge about environmental programs in order to coordinate a rigorous on-site investigation. Likewise, rapid advancement within an organization could be considered evidence of superior performance and, thus, greater learning. Combinations of experiential learning also deserve mention. No one does just one thing at a time, and students may

receive credit for concurrent work. For instance, a student in education might be involved primarily in Instructional Strategies and receive credit in that area. However, a portion of that individual's work might also involve a secondary competency in Curriculum Development and credit could be awarded there as well. Because of less intense involvement, however, Curriculum Development would probably be awarded less credit than Instructional Strategies. Evaluation of practical experiential learning should be considered only after students have fully described their individual experiences and related the learning from these experiences to resulting competencies. Each position held and each task performed should be described. The student's duties should be clear to the evaluator and the evaluator should be certain that the student has more than a descriptive command of his or her assignment. The student should have presented evidence of growth in the position(s) and have described, by example, how learning relevant to degree interests has occurred. A demonstrated increase in responsibilities, the assignment of new tasks, specific job-related successes, or the development of a new program might serve as evidence. In other words, the student should have provided self-assessment of competencies pursuant to the individual degree.

Training Experience Awards

When evaluating training experience, either as individual courses, workshops, seminars, or as related combinations, possible awards could be structured as follows:

20 to 36 clock hours	= 1 credit hour
37 to 48 clock hours	= 2 credit hours
49 or more clock hours	= 3 credit hours

Training experiential learning must also be applicable to academic level credit and related to the student's degree. Proof of substantive content achieved competencies, and applicability should rest with the individual student. Students, therefore, should have provided a course outline for each training session and a written attempt to justify the evaluation of each session for academic credit.

It is especially important that courses be evaluated with the nature of the degree in mind. No blanket policies exist to award a set amount of credit for any course, even though the American Council on Education (ACE) guidelines do provide equations for some United States sponsored training. For example, three credit hours of International Relations may be awarded for completion of the militaries Command and General Staff course by correspondence. The evaluation philosophy of the Experiential Learning team insists on individually based assessments of prior learning experiences. Other guidelines, such as ACE and CAEL are followed, where appropriate, for the student portfolio under consideration.

Military courses demand mention, since the armed forces of most countries provide an especially large number of courses and training activities for both career and non-career personnel. For the most part, these courses emphasize introductory-level skills which are essentially undergraduate in comparison to skills acquired from campus courses.

There are many situations where training experiences outside the job setting occur. If the student has had high level experiences in community service agencies, volunteer organizations, religious activities, or other non-related, high level developmental activities, credit for these life experiences may also be considered.

Documentation

Students should document all practical work experience. Certificates or (should certificates be unavailable) supporting letters should be submitted for each training experience. If evaluations were made available to students, these too should be included in the Experiential learning presentation. It may be advisable to have each applicant have their portfolio notarized in some fashion to support the authenticity of the document.

Upon completion of the portfolio being evaluated, it is necessary to record the credit granted in an appropriate manner on the student's transcript.

Review of the Process

To put this entire operation in perspective, the following process should be followed: An Experiential Learning Team, within the setting of an Open University, will begin by identifying learning that may be credited. This learning must be documented. The learning must be measured. The learning must be evaluated by setting acceptable standards. The learning must then be transcribed in a manner appropriate to the learning and to the function of the transcript.

A future in which faculty and administration of Open Universities accept the premise that adult learners may indeed acquire knowledge and understanding as a result of experience, will be a future which is much more promising for students and, perhaps, for university faculty members as well.



References

- Breen, P., and Warren, J. **The Educational Value of Portfolio and Learning Contract Development.** Columbia, Md.: Council for the Advancement of Experiential Learning, 1981.
- Chickering, A.W., and Associates (Eds.). **The Modern American College.** San Francisco: Jossey-Bass, 1981.
- Coleman, J.S. "Differences Between Experiential Learning and Classroom Learning." in M. Keeton (Ed.), **Experiential Learning.** San Francisco: Jossey-Bass, 1976.
- Ekstrom, R. B., Harris, A. M., and Lockheed, M. E. **How to Get Credit for What You Have Learned.** Princeton, N.J.: Educational Testing Service, 1977.
- Forrest, A. **Assessing Prior Learning: A CAEL Student Guide.** Columbia, Md.: Council for the Advancement of Experiential Learning, 1977.
- Greenberg, E., O'Donnell, K., and Bergquist, W. (Eds.). **New Directions For Higher Education: Educating Learners of All Ages**, no. 29. San Francisco: Jossey-Bass, 1980.
- Jacobs, P. I., and Knapp, J. **Setting Standards in Experiential Learning.** Columbia, Md.: Council for the Advancement of Experiential Learning, 1981.
- Knapp, J. **Assessing Prior Learning-A CAEL Handbook.** Columbia, Md.: CAEL, 1977.
- Knowles, M. **Self-Directed Learning.** New York: Associated Press, 1975.
- Kolb, D.A. **Learning Style Inventory.** Boston: McBer, 1976.
- Parker, G., and Hawes, G. **College on Your Own.** New York: Bantam Books, 1978.
- Shipton, J., and Steltenpohl, E. "Educational Advising and Career Planning: A Life Cycle Perspective." In A.W. Chickering and Associates (Eds.), **The Modern American College**, San Francisco: Jossey-Bass, 1981.
- Weathersby, R. "Life Stages and Learning Interest." Paper presented at the American Association of Higher Education Conference, Chicago, March 20, 1978.
- Willingham, W. **Principles of Good Practice in Assessing Experiential Learning.** Columbia, Md.: CAEL, 1977.

DISTANCE EDUCATION IN CANADA: TOWARD A TYPOLOGY OF LEARNING ACTIVITIES FOR ADULTS

Current research in adult education suggests that adult learners are becoming increasingly independent in selecting the means by which to reach their educational goals. For many Canadian adults, changing lifestyles and fluctuating economic circumstances create an environment which precludes the possibility of attending traditional educational programs. In response, distance education systems are being developed to provide a formal learning option designed to liberate the modern adult student from the constraints of the conventional classroom. Restrictions of time and place need only be those imposed by the learners themselves according to their particular needs.

The Expansion of distance education in Canada stems from a combination of broad social changes and more narrow activities in the area of post-secondary education. Without a pretense of exhaustiveness, suggestions can be made about some already apparent social changes in Canada's social structure which have a direct influence on the expansion of distance education:

- (1) a rapid decline in agriculture; a slightly less rapid decline in manufacturing, combined with a vast increase in service sector employment
(Greenglass, 1982)
- (2) a continuing emphasis on part-time adult education and training to provide the economy with skilled manpower
(Clark and Brundage, 1982 : 207-241)
- (3) the emergence of women as a leading social and political group; and the need for increased availability of education and training opportunities for women entering the labour force¹
- (4) the high unemployment rate of youth (18 to 24 years old) ranging anywhere from 17 to 25 percent depending on the country's geographical region (Toronto Globe and Mail, June 14, 1984:32)
- (5) a willingness on the part of conventional universities, colleges, and other post-secondary institutions to experiment with various technologies of education and augment their own course offerings with courses taught at a distance.

Distance Education and Credentialism

Another influence worthy of mention is the intimate linkage between distance education and credentialism. Given the criticism from the educational establishment directed at the proliferation and meaning-lessness of credentials, one might anticipate that distance educators would be less inclined to contribute to the "diploma disease", as some

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¹ In 1951 the rate of Participation of all women in the paid labour force over the age of 14 was 24 percent. By 1967, it had increased to 35 percent, and by 1981 it had soared to 50 percent (Armstrong & Armstrong, 1983)

commentators have called it. (Dore, 1976) This has not been the case, at least in Canada. A cursory examination of distance teaching in this country makes it clear that credentials and certification attainable through distance teaching methods will be more than ever sought after by an increasing percentage of the population.

In addition, it is the writer's personal opinion that distance teaching universities will be gradually forced to make their credentials more appropriate to job functioning by moving toward various types of performance-based accountability. Instead of being debunked, the credential will come to reflect actual qualifications and skills. In practice, this will mean an emphasis on competence-based education. It will also mean that distance educators include in their curricula many more job-related skills and work-oriented courses to bridge the gap between education and work. This in turn will likely expand the number of routes to higher professional and semi-professional in the occupational structure.

Purpose

This paper attempts to formulate a typology of distance education activities in Canada provided by universities with a clear mandate to provide education at a distance. As we point out later, the typology does not focus on the kind of courses that are offered, but instead, focuses on the degree to which dialogue (face-to-face interaction) is present in a particular type of delivery mode (i.e., correspondence study, television, audio tapes). The extent to which face-to-face interaction is part of the larger support system is also noted. The course offerings and delivery modes of five predominant institutions are analyzed. These institutions are provincially-controlled, public organizations which have risen in prominence over the past ten years or so. The typology provides a conceptual framework from which it is possible to compare the relative significance and use of dialogue among Canadian distance teaching institutions.

Conceptual Framework

Central to the concepts of lifelong learning, open education, and distance education is the assumption that considerable responsibility for education is accepted by the learner. The different relationships which may be established between the learner and the instructional agent in distance education are an acknowledgement of that assumption. Moreover, there is a recognition of the fact that adults differ in their ability and willingness to accept that responsibility and sustain the necessary level of motivation required to cope with the rigours of a distance education course of study or program.

Hilary Perraton (1981: 13-24), Desmond Keegan (1980), and Börje Holmberg (1982) are but a few of the distance educators who have pointed out in recent years that distance education is based on a new academic theory which is fairly alien to traditional didactics. Otto Peters, writing as early as 1965, was convinced that distance education had its own laws of didactical structure - laws which were conceptually flawed presenting both dangers and opportunities to both teachers and students. (1965, 1971) Peters warned that anyone professionally involved in education must presume the presence of two main forms of education which are strictly separable: traditional education based on personal communication and distance education based on industrialized and technological communication.

Didactic Structure

Keegan has pinpointed one of the many dilemmas facing distance educators in his description of distance education's didactic structure:

In traditional education a teacher teaches. In distance education an institution teaches. This is a radical difference. In traditional education the teacher is present in the lecture room with students and his success often depends on the rapport he can build up with students: personality and even idiosyncracies may be central. In distance education a teacher prepares learning materials from which he himself may never teach. Another teacher may use the materials and evaluate students' work. The pedagogical structuring of the learning materials, instructional design and execution may be assigned to others. Personality needs tend to be played down, idiosyncracies eliminated. The teaching becomes institutionalized. (Keegan, 1980: 19)

These and other drawbacks of distance teaching, i.e., the emphasis on the learning of skills by rote; the lack of personal contact with the institution, and the relative insignificance placed on dialogue as central to the learning process are well documented in the literature (Rumble and Harry, 1982; Chang et al., 1983; and Kay and Rumble, 1981).

Clearly, within distance education, there is great pressure to rely on economies of scale. This leads to a reliance on more "impersonal" modes of communication and the need to increase student enrollments. The development of course materials is contracted out to writers who are employed only for the period of writing; as a consequence, teaching becomes anonymous. Enrolment, counseling, and general forms of student support are handled by the institution. In short, distance teaching becomes highly routinized and bureaucratic, resembling an assembly line operation. Distance educators and their critics have been quick to point out the limitations inherent in the didactic structure of distance education. (R.S. Peters, 1970: 104-106; Smith, 1979: 35)

The question this paper seeks to answer is: to what extent is distance education in Canada becoming bureaucratized and institutionalized? In order to shed light on this question, the theoretical contribution of a distance educator, Hilary Perraton, and the work of Paulo Freire will help guide the discussion that follows.

Perraton's Contribution

Perraton suggests that the potential for developing theory in distance education lies within existing paradigms of various philosophies of education, and theories of communication and dialogue. He stresses the need to understand distance education within the larger cultural, philosophical, and political context of educational expansion and the importance of dialogue as the essential pedagogical principle. Without going into Perraton's position in great detail, the implication of his ideas suggest that a theory of distance education should illuminate the ways in which distance education does, or does not, expand learning activities for adults; and at the same time, create a conducive climate for effective dialogue.

According to Perraton:

Learning is more effective if, through dialogue between student and teacher, the student can be shown how the new matter he is learning relates to what he already knows, and relates to his environment. (Perraton, 1981: 14-15)

Expansion

Perraton lists five hypotheses, all of which have been empirically validated, establishing the fact that distance teaching can be effective, and that its costs compare

favorably with those of conventional education. This is his rationale for the expansion of distance education and bears repeating:

- Hypothesis 1: you can use any medium to teach anything.
- Hypothesis 2: distance teaching can break the integuments of fixed staffing ratios which limit the expansion of education when teacher and student had to be in the same place at the same time.
- Hypothesis 3: there are circumstances under which distance teaching can be cheaper than orthodox education, whether measured in terms of audience reached or of learning.
- Hypothesis 4: the economies achievable by distance education are a function of the level of education, size of audience, choice of media and sophistication of production.
- Hypothesis 5: distance teaching can reach audiences who would not be reached by orthodox means. (pp: 16-19)

Dialogue

Having made his case for the potential for expansion, Perraton then turns to a discussion on dialogue. He puts forward nine more hypothesis based on empirical evidence which should guide theory.

- Hypothesis 6: it is possible to organize distance teaching in such a way that there is dialogue.
- Hypothesis 7: where a tutor meets distance students face-to-face, their role is changed from being a communicator of information to that of facilitator of learning.
- Hypothesis 8: group discussion is an effective method of learning when distance teaching is used to bring relevant information to the group.
- Hypothesis 9: in most communities there are resources which can be used to support distance learning, to its educational and economical advantage.
- Hypothesis 10: a multi-media program is likely to be more effective than one which relies on a single medium.
- Hypothesis 11: a systems approach is helpful in planning distance education.
- Hypothesis 12: feedback is a necessary part of a distance learning system.
- Hypothesis 13: to be effective, distance teaching materials should ensure that students undertake frequent and regular activities over and above reading, watching or listening.
- Hypothesis 14: in choosing between media, the key question on which the rest depend concerns the use of face-to-face learning.

Freire's Contribution

Unlike Perraton's treatment of dialogue, Freire's writings focus more on the **quality** and the **structure** of dialogue which, we submit, need to be included in the way distance educators define dialogue. This is not to suggest that Perraton is unaware of the importance of the quality and structure of dialogue. The following elements of Freire's approach, which should be familiar to most educators by now, are the ff:

- (1) the view of education as a dialogue between people who learn from each other;²

² Freire (1970:67) refers to the teacher as "teacher-student" and to the students as "students-teachers".

- (2) the belief that education is a partnership in an on-going process of lifelong inquiry, rather than a depositing of static knowledge into passive minds;
- (3) a practical method that begins with the adult student's experiences, moves to the presentation of course materials, and then leads the students to examine once again their own experiences in light of these concepts.

Despite the inherent problems, therefore, of arranging dialogue when learning is based on materials based in advance and distributed en masse, research has indicated that opportunities for dialogue built into the course development and delivery system enhances student satisfaction and learning. (Adriance, 1982: 198-206)

Toward a Typology of Learning Activities

The following typology classifies distance education provision in terms of a continuum, consisting of six types, each representing the kinds of support which are provided. This support is provided through structured interactions which are essential to instruction and learning.

- Type I: Instruction is delivered through any one or a combination of one-way, non-interactive media (e.g., print, audio, or video).
- Type II: Provision is made for delayed two-way communication between learner and instructional agent (e.g., interaction through the mail).
- Type III: Provision is made for coincident two-way communication between learner and instructional agent (e.g., interaction through telephone dialogue or with a computer).
- Type IV: Provision is made to permit remote group interaction among learner, agent, and others. (e.g., through teleconferencing or live interactive video)
- Type V: Provision is made for occasional or regularized face-to-face interaction. (e.g., seminars, workshops, clinical experiences)
- Type VI: Fully supported instruction is supplied at a location nearer the learner than the institution providing services (e.g., an extension program, a lecture series, or a satellite campus)

More than physical isolation or geographic distance, it is the kind of instructional and motivational support which is provided by the institution that distinguishes the classifications in the typology. Each type symbolizes a segment of a continuum which ranges from provision of considerable support.

The purpose of the model is to illustrate the relationship and proportion within each type of the two basic dimensions on which the typology is based: the dimension of instructional support and the dimension of learner self-sufficiency. There are different degrees of self-sufficiency required by the learner in each case, and as the level of support provided by the educational agency increases, the corresponding level of self-sufficiency needed is decreased.

A high level of support where the agent merely moves physically nearer to the student, as represented by Type VI, requires that the learner be much less self-sufficient than does the condition where there is no interaction, as symbolized by Type I. In Type I, the degree of self-sufficiency required of the learner is very high.

In some respects, the typology may be interpreted as being cumulative in that, for

most applications, a higher numbered type will include the kinds of support subsumed in the lower-numbered types. For instance, most courses which offer a telephone contact also offer a marking service providing written guidance, correction and grading of submitted assignments. However, this may not always be the case and the typology may be applied giving each type an independent status. No one type has more or less merit than any other. Each will have utility and meaning for those learners who choose it. What is significant is that an education system offer learners the opportunity to make that choice.

Figure 1: Typology of Learning Activities

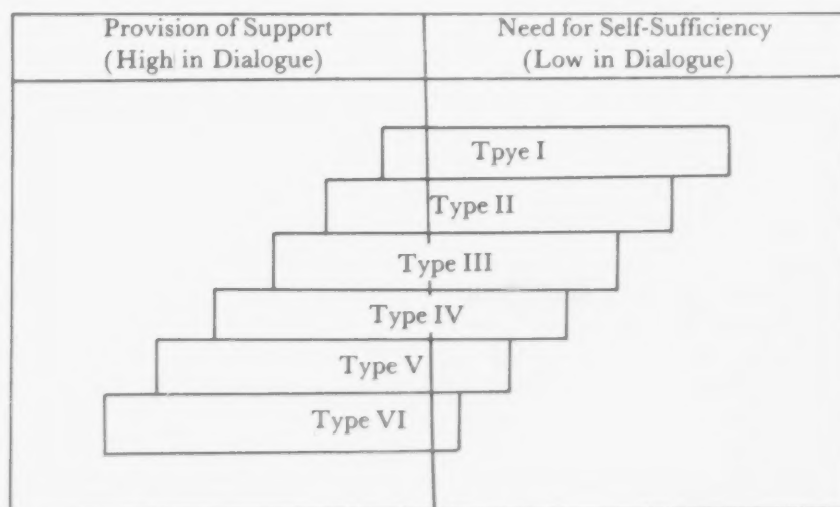


Fig. 1.

The Typology Applied to Distance Education Provision

A major factor in the success of distance education in Canada has been the extent to which providers have achieved a balance between the learning activities the student carries out independently and those which involve direct contact with other students and tutors. An analysis of the kinds of courses and programs provided distance students was conducted. The Directory of University Correspondence Courses (1983) and Distance Education: Canadian Courses by Correspondence (1983) revealed a plethora of courses at all levels of the educational spectrum. These sources revealed the name of the providing agency, the title and level of the course offering, entrance requirements, the credit value of the courses and the tuition costs. Unfortunately, no information was provided on the type of course delivery or the nature of the interaction between student and tutor.

It is clear that a wide variety of providers - from technical and proprietary schools to universities - are engaged in distance teaching in Canada. Since this paper is most interested in university distance education, a sample of university distance education providers was selected for the purpose of assessing the degree to which their course offerings could be compared to our typology of learning activities.

Detailed information on course structure, course delivery and student support was obtained on Canada's five predominant distance teaching universities. These institutions not

only enrol the largest number of distance students, but among them represent different organizational types with slightly different orientations and philosophies of open education.³ A brief description of each is provided to acquaint the reader with major similarities and differences.

a. Athabasca University. According to Rumble and Harry's classification scheme of distance education universities, this organization would be the only one in Canada defined as an "autonomous, centrally controlled distance teaching university" (1982: 28-29). Athabasca determines its own curricula, designs and delivers its own courses, has a clear responsibility for its own examinations and accreditation structures, determines its own student support system, and has financial autonomy in the same way other conventional universities have. (Shale, 1982: 32-53)

Athabasca University has been in operation since 1973 and since that time has experimented with different course development and delivery models. Presently, it offers "home-study" courses available to students across the country; lecture-style courses in selected locations throughout the province as a means of responding quickly and efficiently to local needs; reading courses at the senior level with little or no instructional design input, and seminar-supported courses, which are based primarily on home-study instructional materials supplemented by a "live" instructor. (Shale, 1982: 40-41) These courses have study schedules that are determined by the schedule of seminar meetings. More and more courses are being offered by teleconferencing. These latter courses utilize home-study materials and are led by tutors. The home-study, print-based, course remains the mainstay of the Athabasca instructional system.

The more noteworthy element in the university's academic support system is the tutor who is automatically assigned to a predetermined number of students. They are the immediate contact between student and university; they answer students' questions pertaining to course content, and offer the only opportunity for educational dialogue on course-related matters.

b. The University of Waterloo. The Correspondence Program at this university offers nearly 300 degree-credit courses in many academic disciplines. In 1982 more than 5,000 students were enrolled. In fact, one out five students at the University is enrolled through its Correspondence Program. Distance education courses consist of a complete learning package with lectures on audio tape cassettes together with accompanying notes, diagrams, charts, equations, etc. The package includes assigned problems, exercises, or essay topics. At designated times, students send in assignments which are marked and graded by the professor in charge of a particular course. In response to students' written assignments, professors may prepare short "tutorial" tapes which act as feedback. End of term examinations, required in all courses, are administered through established examination centres. (University of Waterloo, 1983)

According to the Rumble and Harry classification, the University of Waterloo would fit the category of an "autonomous, decentralized distance teaching university". (1982: 28-29) It shares all the characteristics of Athabasca University except that it exercises a lower degree of control over delivery and student support systems. The Correspondence Program courses taught at a distance are almost identical to the on-campus courses in terms of content, and of course, the distance student is subject to the same entrance and degree requirements as the on-campus student.

³ Total enrolments for the five universities under study is approximately 45,000.

c. Memorial University of Newfoundland. Located in Canada's eastern most province, this institution uses distance education methods along with a variety of community education techniques to bring education to isolated and remote parts of Labrador and Newfoundland. This institution works with rural communities, with a strong oral tradition, that are experiencing rapid social change resulting from new technology, mass formal education, and accelerated centralization of the population (all conditions similar to those in developing nations). Using a community education approach, traditional and non-credit courses are made available, as well as video tapes on a wide variety of topics. Access is also achieved through public broadcast television and intra-community communications, information sharing, and education. Attempts are made to stimulate community discussion, using local animators and a community forum approach. (Draper, 1982: 43-47)

Memorial University's use of distance education places it in the category of a mixed or hybrid institution, where in distance education is part of a larger continuing education on community education outreach initiative.

d. The Open Learning Institute. This institution is the major provider of distance education in the province of British Columbia. Although the province's commitment to an egalitarian delivery of pre-adult education goes back many years, the delivery of post-secondary, adult and continuing education has been the subject of deliberate planning - one which has resulted in the burgeoning of a multi-faceted distance education system.

The Open Learning Institute was established in 1978. It currently serves 15,000 students annually enrolled in more than 100 courses in university degree, technical, vocational, and adult basic education programs. The Institute is obviously Canada's most "multi-purposed" distance education provider, offering courses with a broad range of support. It relies heavily on print-based instructional materials for all its courses. Many, but not all, are supplemented with audio tapes and a few utilize television to deliver supporting material. The Open Learning Institute has made limited use of interactive television in its delivery process but relies on a strong telephone tutorial system in addition to postal communication. Some courses require attendance at designated seminars or clinical sessions. Most non-credit courses do not provide any support; students rely solely on the material which is mailed to them and do not interact with the Institute in any way (Learning at a Distance and the New Technology, 1982: 25-27).

British Columbia is one of Canada's leading provinces in terms of its commitment to distance education. Almost all of the 23 post-secondary institutions in B.C. now provide some degree of distance education (Learning at a Distance and the New Technology, 1982). As a mixed or hybrid institution with limited responsibility for university programs, The Open Learning Institute combines the characteristics of a "mixed mode, multi-departmental model" (Rumble and Harry, 1982: 28-29) with that of an "autonomous centralized distance teaching system with a high degree of control". (pp. 28-29)

e. Télé université de Québec. This institution falls within the category of an "essentially autonomous distance teaching university operating within a federated university structure encompassing both conventional campuses and a distance teaching unit" (Rumble and Harry, 1982: 29). The Télé université is an autonomous unit operating under the University of Québec Board of Governors, which oversees the management of the University's largely autonomous campuses at Montreal, Trois Rivières, Rimouski, and Chicoutimi, as well as a number of more specialized institutions. (Daniel and Smith, 1979)

Today, the Télé université attracts more than 12,000 students. Initially organized to provide in-service teacher education courses, the university has expanded its delivery system

Figure 2: Typology of Learning Activities in Canadian Distance Education

Institution	Institutional Type	Type of Delivery and Student Support	Opportunity for Dialogue
Athabasca University	"autonomous, centrally controlled" -determines curricula and delivery systems -establishes degree and program structures -financially self-regulating and independent	Types II to V -home study with extensive tutorials -seminar supported courses -teleconferencing -audio cassettes	medium to high
Memorial University of Newfoundland	"hybrid, mixed-mode, multi-departmental"	Types IV to VI -animators -multi-media	high
University of Waterloo	"autonomous, decentralized"	Type I to III -print-based -audio cassettes -limited tutorials	low
Télé université	"essentially autonomous, operating within federated university structure"	Types III to VI -multi-media -seminar support -animators	high
The Open Learning Institute	"mixed mode, multi-department, multi-institutional"	Types I to VI -print-based homestudy -extensive tutorials -seminar support	non-credit - no opportunity for dialogue credit - medium to high

to include home-study, seminar supported, and community education programs. The university used a multi-media approach along with community education techniques to stimulate discussion among its students. Its use of animators is well known and very effective indeed in bringing about social change.

Limitations of the Typology

Much of what passes for theory in distance education is, in reality, only a loose clustering of implicit assumptions, inadequately defined concepts, and a few vague and logically disconnected propositions. The typology we have put forward does not represent a theory of distance education, but rather, an "image" of the practice of distance education. Our concern is not with developing propositions, but with finding a place for dialogue in the configuration of distance education. The typology is concerned with how dialogue relates to courses taught at a distance, and will give the interested reader some sense of the relative significance of dialogue.

Typological constructs often stimulate other types of educational inquiry and problem-solving. Others may be inclined to search for causal factors behind phenomena or they can seek the underlying principles behind phenomena. Our typology says nothing about cause and effect relationships; it is concerned only with bringing some order and a sense of broad perspective to the phenomena of distance education. It is hoped that others, by perceiving the general pattern of configuration, will examine particular elements of distance education, and search for further explanations. Thus, in contrast to theory which relates propositions with one another in a logically coherent manner, our typology can simply describe part of the phenomena of distance education.

Conclusions

The type of delivery and student support built into distance education courses have been classified into six basic types. An examination of detailed course and delivery modes from five predominant distance teaching universities revealed that not all of the six types were represented within each institution. An attempt was made to determine the degree to which each delivery mode allowed for student-teacher or student-student dialogue. Generally, it was found that the delivery modes utilized by our sample institutions were: (1) moderately flexible, (2) allowed for considerable dialogue between teacher and student, and (3) essentially print-based.

As to the question of the institutionalization of distance education, it would appear that one institution, namely, the University of Waterloo, places low priority on student-teacher dialogue. The Open Learning Institute, Memorial University, and the *Télé université* were rated the highest in terms of the emphasis placed on dialogue and interaction. Athabasca University was close behind.

Those familiar with Freire know that the highest level of consciousness in his theory of pedagogy is critical consciousness, achieved through the process of conscientization. This level is marked by depth in the interpretation of problems, self-confidence in discussions, receptiveness, and refusal to shirk responsibility. The quality of discourse is dialogical. At this level, the person scrutinizes their own thoughts, recognizing the proper causal and circumstantial correlations, and takes action (praxis). Dialogue and social activity go hand in hand.

There are pressing needs for a clearcut analysis of the role of dialogue in distance teaching. As distance education expands, efforts must be made to ensure that students are not passive recipients of static knowledge, but active participants in their own learning. Distance education institutions have the responsibility to maintain, as far as resources permit, a high level commitment to the centrality of dialogue and face-to-face interaction in their course development and delivery plans.

Our investigation reveals that dialogue is an essential part of distance teaching in Canada. In Freire's terms, this means that course designers do not view students as *tabula*

rasa. Knowledge is not seen as a gift bestowed on students by experts, and consequently, students are not alienated by distance education institutions. However, distance educators must be cautious that technology does not overcome them. They must treat students with respect and take care not to impose on them a ready-made view of reality.



References

- Adrianne, Madeline. "Critical Dialogue", *Teaching Sociology*, 9, 2, January 1982: 198-207.
- Armstrong, Pat and Hugh Armstrong. *A Working Majority: What Women Must do for Pay*, Ottawa: Canadian Advisory Council on the Status of Women, 1983.
- Chang, T.M. et al. *Distance Learning: On the Design of an Open University*, The Hague: Kluwer-Nijhoff, 1983.
- Clark, Ralph J. and Donald C. Brundage. "Adult Education Opportunities in Canada", In R.E. Peterson, et al., *Adult Education and Training in Industrialized Countries*, New York: Praeger, 1982: 207-241.
- Directory of University Correspondence Courses. Richmond, B.C., Canadian Association for University Continuing Education, 1983.
- Distance Education: Canadian Courses by Correspondence, Edmonton: Alberta Manpower, 1983.
- Dore, Ronald. *The Diploma Disease: Education, Qualification and Development*, London: George Allen and Unwin, 1976.
- Draper, James. "Adult Education: A Perspective for the Eighties", in *Learning at a Distance: A World Perspective*, ed. J. Daniel et al., Edmonton: Athabasca University, 1982: 43-47.
- Freire, Paulo. *Pedagogy of the Oppressed*. New York: Seabury, 1970.
- Greenglass, Esther. *A World of Difference: Gender Roles in Perspective*, Toronto: John Wiley, 1982.
- Holmberg, Börje. Recent Research into Distance Education, Zentrales Institut für Fernstudienforschung, Hagen, February, 1982.
- Kay, Anthony and Greville Rumble. *Distance teaching for Higher and Adult Education*, London: Croom Helm, 1981.
- Keegan, Desmond. "On the Nature of Distance Education", Zentrales Institut für Fernstudienforschung, Hagen, November, 1980.
- Learning at a Distance and the New Technology. Vancouver, B.C., Educational Research Institute of British Columbia, 1982.
- Perraton, Hilary. "A Theory for Distance Education", *Prospects*, XI, 1, 1981: 13-24.
- Peters, Otto. *Der Fernunterricht: Materialism zur Diskussion einer neuen Unterrichtsform*, Weinham: Beltz, 1965.
- Peters, Otto. "Theoretical Aspects of Correspondence Instruction" In O. Mackenzie and E.L. Christensen, eds. *The Changing World of Correspondence Study*, Pennsylvania State University Press, 1971.
- Rumble, Greville and Keith Harry. *The Distance Teaching Universities*, London: Croom Helm, 1982.
- Shale, Doug. "Athabasca University: Canada", In Greville Rumble and Keith Harry, *The Distance Teaching Universities*, London: Croom Helm, 1982: 32-53.

Smith, Kevin C. *External studies at New England - a Silver Review 1955-1979*. Armidale: University of New England, 1979.

Toronto Globe and Mail. "Unemployment Highest Among Youth", June 14, 1984: 32.

University of Waterloo. *Correspondence Courses 1983-84*, Waterloo, Ont.: University of Waterloo, 1983.

Supporting Paper IV

COMPUTING IN OPEN HIGHER EDUCATION - SOME LESSONS*

The belief that information technology is of fundamental importance to the future of the planet is no longer confined to the futurists, such as Alvin Toffler, James Martin and Christopher Evans, and the small minority who are their readers. The arrival of computer shops in the high streets and in the shopping centres of the affluent nations has done much to convince a wider public that computers are here to stay and that they will take on an increasing importance in our everyday lives. The view that information technology is gaining hold. One recent view is that *"technology is really the sum of knowledge - of received information - which allows things to be done, a rule which frequently requires the use of machines, and the information they incorporate, but conceivably may not"*.¹

Clearly the technology which treats effectively the information resource will itself be a most powerful tool. On this type of view information technology will be of primary importance providing the essential means to exploit all other technologies. There are many different indicators signifying the same thing: there has been a growth in the size of the industry in most Western countries in terms of contribution to GDP, numbers of sales and in levels of employment†; there has been a concomitant growth in the demand for and provision of publications, from weekly magazines for amateurs to learned journals for academics; likewise, educational courses have boomed. It is crucial therefore that open higher education institutions make an educationally sound and socially and economically appropriate response to the challenge of preparing students for life and work (an interesting distinction!) in the information society of today and the future.

Briefly, this implies an education that is technologically up to date, is based on an accepted corpus of knowledge and which comes together in a way that students can understand and appreciate. For such a response to be socially and economically appropriate it needs to offer students an education which can be readily related to a broader social context and which prepares students to meet the shorter and longer term needs of national and international labour markets. In this respect, vocational education may be seen as certainly addressing these short term needs and sometimes addressing the longer term needs. More theoretically based studies may be seen as meeting the longer term needs in both R&D and in preparing students to cope with future changes in the technology. Naturally, even the more theoretical courses in the information technology field have a short term vocational pay-off as well.

The major lesson that is pointed in what follows is that clear objectives are an essential prerequisite of successful courses. Compromises among conflicting requirements

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† Barry Boehm estimated the 1980 US bill for software alone at \$40 billion.² Slotnick and Slotnick³ quote sales figures for numbers of computers in use in the US as rising from 55,900 in 1967 to 324,600 in 1975. They also estimate that 1.5 million people in the US are employed in computer related jobs.

present problems as we shall see. It is not the intention here to attempt to set out an ideal curriculum (the field of information technology is too large and varied, including as it does computer science, data processing and telecommunications. It is also evolving quickly. Another forum would be more appropriate). Indeed there may be many ideal curricula each relative to the circumstances for which it is designed. However, a brief digression into the need for a policy and a list of priorities at the national level is worthwhile.

Desirability of National Policy

If knowledge is seen as a real national resource then the process of education that develops and mines that resource needs to be directed to what sort of knowledge is required by the nation and hence to what priority should be given to the teaching of various subjects. It is assumed that in part at least this is a governmental responsibility. For example, it would not be nationally appropriate to launch large new degrees in robotics in a country whose government had no intention of encouraging investment in manufacturing industry. Likewise, if a government were developing or fostering a strategy of investing in software production rather than in chip design and production it would not be desirable for the universities and colleges to be turning out more digital systems engineers than software engineers. Of course it would be possible for the educational establishment to generate its own objectives, although without reference to government it could not be certain that its approach was consonant with national social and economic goals. Nor does it make sense to leave the decisions to be resolved by the free play of market forces. The market after all is far from perfect. There are significant time lags between the demand for particular courses being recognised and the system being able to meet that demand. Also, since higher education does not obtain most of its income either from its student fees or by selling its graduates to employers, the free market clearly will not mediate to optimise the numbers and types of degree programmes offered. It is therefore desirable that there be national educational policies developed with respect to information technology and which are consistent with broader national objectives. It must be stressed that this is not an argument for total governmental direction of curriculum design. Academic freedom and independence is essential in an open society, but the preservation of these conditions does not exclude the possibility of a fruitful interaction between government and academic. In Britain, the Alvey Committee's Report⁴ paid some attention to this question of what the nation required of its tertiary education sector with respect to computing education. Interestingly it said, "7.10 *The role of the tertiary education sector in relation to computing is currently confused. There is too broad a spread of standards and courses do not meet needs.*" It went on to outline national needs for both undergraduate and postgraduate level programmes. This is a useful start, but the Report had limited terms of reference and consequently its recommendations concern that limited set of national objectives which relate to advanced information technology. The Australian Department of Science and Technology's recent draft National Technology Strategy⁵ is similarly a step in the right direction, but in this case limited to the overall field of technology. Unhappily, it is not apparent that any real attempt is being made to formulate educational policies to meet the broad changes in society that have and will follow the arrival of the information age. (I do not regard *ad hoc* reactions like the mass purchase of microcomputers for secondary schools as such a policy. The Alvey Committee agreed, "But, it is no good just providing schools with microcomputers. This will merely produce a generation of poor BASIC programmers").⁶ In default of better guidance individual curriculum designers must make their own decisions about course content. As I shall argue, this can lead to perfectly sound

and appropriate design so long as there is no attempt to meet the requirements of conflicting objectives.

The British Open University

Let me set the context for the body of this paper. The experiences on which it is based derive from my employment at the British Open University as a Lecturer in Computer Science within the Mathematics Faculty between 1982 and 1984. Although there will be differences in circumstance, I believe that many of the general conditions obtaining will be familiar to members of other institutions. We are talking about an environment in which there is a significant and noticeable scarcity of resources. Money to mount undergraduate courses is in short supply. At the Open University there is a felt need to maintain student numbers in order to keep income at as high a level as possible. (Not only do student fees contribute to income, but grants from the Department of Education and Science are based, at least in part, on student numbers). This is in the face of rising fees† and decreased disposable incomes for large sectors of the public.

The situation in the disciplines which make up information technology is more complex. There is a high demand for courses, both in terms of the numbers applying for courses currently in presentation and in the interest shown in potential new courses. Coursework requires not just reading course units, but hands-on experience of computer hardware and software. The demand outstrips the supply leading to the imposition of quotas so that students are assured adequate access to computing equipment. Shortage of funds prevents the purchase of more hardware. At the same time there is a shortage of suitably qualified staff available to prepare courses. This exacerbates the problem of there not being enough different courses offered. It is within this context of high demand and limited supply and of no clear direction from our political masters that course designers have to take the responsibility of determining what to teach.

At the Open University there is a complicating organizational factor. Individual Faculty Boards are responsible for the academic approval of courses produced within each Faculty. At present several faculties have a real and legitimate interest in computing, including Technology, Social Science, Education and Mathematics. This spread of interests and division of responsibility does result in difficulties in formulating a coherent policy for computing education across the curriculum, although in this it is no different from many conventional universities.

Where it is different is in its open-ness. For my purposes the concept of open-ness derives from the absence of formal academic prerequisites. The only prerequisite to the study of any of the University's undergraduate computing courses is having passed one foundation course which may have had no immediate relevance to technology, e.g. A101, the Humanities foundation course. To study any of these same computing courses as an associate student (i.e. a one-off student who is not registered for a degree) requires no academic prerequisite. It is this very open-ness that makes the University particularly sensitive to rapid changes of demand. Students are not immediately deterred from applying by their lack of qualification in, say, secondary school mathematics.

I shall concentrate here on the experiences of the Computing Discipline within the Mathematics Faculty as that is where my experience lies and because it is the one discipline in the University whose only interest is in computing.

† Fee levels for a full credit undergraduate course rose from ninety-eight pounds in 1981 to one hundred and thirty three pounds in 1984, that is significantly faster than the rate of inflation.

The Demand for Computing Education

It had been apparent for most of the 1970s to members of the Computing Discipline that there was a number of different demands for computing courses, demands which arose from a variety of motives. Some of these motives are tabulated below in the form of typical questions which may then be associated with particular subject areas:

Question	Subject
(1) How do I get a job in computing? How do I do it better?	Probably Programming, Data Processing or Information Systems, but could be almost anything.
(2) What is all this fuss about computers? What are they? How do they work?	Computer Awareness/Literacy
(3) What is the theory behind computers?	Computer Science
(4) How exactly do compilers and operating systems work?	Systems Software
(5) How do I use my computer at home? How do I keep up with/teach my children?	Computer Awareness and Programming
(6) How do I, as a teacher, teach others?	A mixture of the above subjects, depending on the level and direction of the teaching.

Let me stress that this table is intended to serve only as a very rough schematic outline of the sorts of question which motivate students to apply for computing courses. Of course the motives are often more complex and the appropriate curriculum for a student should be more sophisticated than these broad categorisations suggest. Appendix I outlines the contents of the subject areas listed.

In contemporary society all of the questions tabulated are legitimate. They are questions to which the educational system should be able to provide answers. However, not all of the subjects listed are the proper concern of higher education, although sometimes it appears that people think that the universities and colleges are expected to teach anything and everything to do with computing. This ought to conflict with the other widely held belief encouraged by misleading media coverage that computing is easy. It is quite literally child's play as may be seen from the innumerable photographs and television clips of children sitting in front of visual display units, deeply engrossed. It is easy to slide from such images into the belief that this is the sort of thing that computer professionals and academics do. In the main, it just is not so. Nevertheless, it leads to a partly misplaced demand for the Open University's computing courses. But even discounting the demand for courses inappropriate to computing courses. But even discounting the demand for courses inappropriate to higher education by virtue of their not being sufficiently academically taxing, this still leaves a large and varied demand which cannot be fully met by a single course or even by a limited programme of courses.

Supplying the Demand

Assuming that there are suitable academics available to provide the teaching material, there is a number of different directions in which the curriculum designer may

proceed. On the one hand there is the computer science route with its foundation in mathematics and rigorous approach to both hardware and software. The ACM Computer Science Curriculum⁷ is a good example. On the other hand there are the business oriented curricula which concentrate on data processing and management of the EDP function in a commercial environment. There are many examples. One such is that offered by the Queensland Institute of Technology in its Bachelor of Business-Computing degree.⁸ There is a third approach which combines a measure of the two already mentioned. The ACM Information Systems Curriculum⁹ details one compromise. The undergraduate degree programme in Informatics¹⁰ on which I am currently working at Griffith University is an interesting variant on this theme, and of course many variants are possible. The important feature of any degree programme in computing related subjects and of any constituent course is that its objectives should be coherent and attainable. At the Open University a degree may be made up of any six credits (eight for Honours) of courses drawn from the whole range of those on offer. This does not preclude making available a profile (set of courses) relating to a particular discipline. It does mean, however, that individual courses need a certain element of self-sufficiency as any course may be studied separately without commitment to study the other courses in the profile.

There is another class of courses, not programmes, commonly made available in universities and other tertiary institutions, widely called service courses. These make available to students in disciplines other than those of information technology the computing knowledge and skills necessary for them, e.g. elementary problem solving and programming skills, modelling techniques and statistics packages like SPSS. (It might be worth remarking that computer scientists in the main dislike teaching service courses and tend not to regard them as academically respectable). They are however most necessary and in the Open University where there is no fixed programme, with no particular line of progress to a specific degree, there is a case for making such a course available to engineers, social scientists and to any student who may need it. Although at the Open University computing facilities are provided for any course that requires them and the requisite skills are taught in that particular course this is not an argument for not providing an introductory course. The skills and Knowledge acquired may well prove useful in subsequent studies or in some other part of life. Thus, a broad introduction to computing is potentially an integral part of a general education even at the tertiary level.

So, a number of paths are available to the curriculum designer, all meeting some of the requirements of students wishing to study computing, but none satisfying everybody. Given the high demand and the institutional pressure to attract and retain students it is easy for the curriculum designer to feel obliged to provide something for everybody. This is where an open conflict can arise between academic objectives and students' felt requirements. I shall argue that it is doubly important for open learning institutions to harness this demand, but in doing so they must not compromise their academic quality by following demand. If students want computing education, then of course we should try to provide it, but such education need not be provided by the tertiary sector and certainly need not lead to tertiary qualifications. In saying this I am foreshadowing the approach that I shall advocate.

Experience of the Computing Discipline

First, however, I shall describe some experiences of the Open University which will support my contention that mixed objectives can cause serious problems. In the mid-1970s the Open University recognised the need for different courses for different audiences. At that time it presented three courses, all introductory, but each addressing a separate audience.

M251, *An Algorithmic Approach to Computing*, was an introduction to Computer Science using the conventional approach of studying the design and analysis of algorithms. TM221, *The Digital Computer*, introduced computing through study of the hardware and lower level software of digital computers. It was jointly developed and presented by the Electronics Discipline of the Technology Faculty and the Maths Faculty's Computer Science staff. This was appropriate to students with interests in electronics and digital systems as well as to those with a clear computing interest. The third course PM951, *Computing and Computers*, was essentially computer awareness. It was popular with those who did not wish to be further bamboozled by the computer buffs. It offered an all round introduction including elementary hardware architecture, BASIC programming and some instruction in system design. (It is worth noting that *An Algorithmic Approach to Computing*, and *Computing and Computers* overlapped to a significant extent and could not both be counted towards a degree by a student who chose to take both. Also, *Computing and Computers* originally existed outside the undergraduate degree programme, but was later included in it, an indication perhaps of the changing perception of the academic worth of computer awareness courses.) This approach enabled staff to prepare courses with consistency and integrity while offering students a helpful choice.

By 1982 all of these courses were somewhat out of date, a problem felt particularly keenly in a fast moving area like this. In that year *Computing and Computers* and *An Algorithmic Approach to Computing* were replaced by M252, also called *Computing and Computers*. M252 attempted to be both a foundation in computer science and a computer awareness course. Its launch coincided with government initiatives to expand computer education in schools and with the micro boom. There was a substantial demand for the new course and a dramatic dropout. Fewer than 50% of those who registered initially for the course eventually gained a pass. Indeed in 1982 and 1983 respectively only 51.6% and 53.6% of initially registered undergraduates sat the final exam.¹¹ In other words, just under a half fell by the wayside. Although such wastage rates are not unparalleled as Woodley and Parlett have shown (see Table 13, reference 12), they are nonetheless at the top end of the range for second level courses. In their research findings Woodley and Parlett posit four groups of causes of student drop out: course factors, study environment factors, motivational factors and other factors e.g. administrative errors. We shall look in particular at the course factors. These course factors are divided into seven categories: design, workload, level, content, broadcasts, tuition and other course factors, e.g. ambiguous assessment questions. Taking each in turn:

(a) **Design** - Woodley and Parlett's description of this factor is '*badly written course units*' including features such as unclear objectives. At the course unit level in M252 no learning objectives or teaching aims were made clear which almost certainly made the material harder to learn from than it need have been. At the level of the whole course there were mixed objectives as I have indicated and this too cannot but have contributed to the various problems which caused the student drop out.

(b) **Workload** - The typical problem is of the course being overloaded given its credit rating. It is widely accepted in the Open University community that two half-credit courses almost invariably require more work than a single full credit. M252 is a half-credit, and characteristically is overloaded. The University recognised that the assessment was excessive in 1982 by paying tutors a 50% supplement for all assignments worked. This extra marking effort was entirely consistent with reports of students taking 20-30 hours to complete what were nominally 6 hour assignments.

(c) **Level** - A course thought to be either too difficult or insufficiently demanding can cause drop out. In this case M252 was often said to be too difficult. It is not easy to evaluate this claim. If indeed many of the students who registered for the course were expecting a computer awareness (literacy) course it is quite likely that they would have thought the course too difficult. However, this would be to judge the level according to incorrect standards. It is more revealing to mention that the Course Team which revised the course in 1983 for introduction in 1984 considered the level to be correct. In the revision no difficult concepts were omitted. In fact some new concepts were introduced as a result of a change of programming languages from the relatively simple Structured Time Shared BASIC to the more complex UCSD Pascal.

(d) **Content** - The classic problem is of the content not being what was expected from the course description. M252 students certainly felt that this was the case. However, this can result from a genuine mismatch of description and content and from an unwillingness on the part of the reader to read and understand the description. Although there is no doubt that the course description in the Courses Handbook (the document which lists and describes all OU courses and forms a basis for students' course choices) was unduly optimistic and misleading, it is difficult to believe that students understand and heed warnings when they do receive them.[†] So it seems unlikely that a large proportion of the drop out can be ascribed to an inadequate course description.

(e) **Broadcasts** - Although viewing and hearing some broadcasts was necessary to the successful completion of the systems analysis and design assignment, there were no special problems associated with broadcasts.

(f) **Tuition** - As we have already noted, assignments in 1982 were unduly long, taking tutors much longer than would be usual to mark. This might have affected drop out, but we should be cautious in placing much weight on this factor as most of the drop outs occurred before the third of five assignments was due. So a student in general would only have had two bad experiences of slow assignment turnaround prior to drop out. It seems most likely that the importance of this factor is as one of a number of causes which combined led to drop out.

(g) **Other Course Factors** - Certainly there were some extraneous difficulties in 1982 including frequent and bulky errata and the complete abandonment of the study of the final practical computing exercise because it did not work properly. This would scarcely have encouraged students to persevere, but on the other hand the major part of the drop out had already occurred before the last computing exercise was reached.

By 1983 many of these problems had been cleared up. Errata were reduced, the final practical computing exercise was not given to students, assignments were shortened dramatically and hence the workload was reduced. Despite this the drop out was marginally higher. It would seem then that the more fundamental reasons for drop out associated with the course itself were factors such as mixed objectives, perceived difficulty, failure to meet students' expectations, and workload which, though reduced, was still high.

[†] At an informal seminar given by A Mullett and C Sauer at a Technology Summer school on 27/7/83 at the University of East Anglia to a group of some forty student wishing to study computing with the Open University, it became most apparent to us both that very few of those attending, probably no more than a dozen, believed what we told them about the difficulty and amount of work involved in studying M252 and TM222, the new version of The Digital Computer.

It would be worthwhile to outline here what it was in the early parts of M252 that deterred so many students. For those expecting a computer awareness/literacy course it seems to have come as a shock that after the first unit's brief introduction to terminology such as hardware, software, CPU etc the course taught programming via a top-down development method with a formal Program Design Language (PDL). Data structures and file processing were taught rigorously with some reference to ideas like data abstraction and data hiding. This is not the stuff of elementary computer awareness courses.

Although there is no evidence to suggest that students dropped out because the presentation was not sufficiently formal, students proceeding to study Computer Science elsewhere might well find themselves less well-prepared than they would expect. For example, M252 would not have prepared them for treating data structures as discrete algebraic structures. So, to this extent at least, M252 is not the stuff of introductory Computer Science courses either.

A Way Forward

It does thus seem that the attempt to meet two quite separate sets of student requirements through a single course was misconceived. How then should an open educational institution tackle this sort of problem? I believe that the Open University's continuing education programme points the way. A range of courses (or packs) derived from existing courses has been produced. PM681, PM682, PM683, and PM684 address various topics: Data Analysis, COBOL Programming, UCSD Pascal Programming and Systems Analysis and Design. Each course addresses a much narrower field than M252 and may be taken by the student whose interests are limited. Likewise the courses generated by the Micros in the Schools project provide real help to school teachers wanting support in the relatively novel task of teaching computing to school children. The planned pack on choosing a business micro is perhaps the clearest example yet of a course that in itself does not warrant inclusion in the tertiary curriculum, but which meets a real and distinct felt need. If people want to update themselves, sharpen their skills or compete with their children then it is appropriate that courses be made available without their being obliged to take an assessed tertiary level course. However, it does not follow that the Open University or other higher educational establishments should provide these courses. Simply because the Open University is open, it should not be assumed that the public has a legitimate demand on it for all its educational requirements. With due deference to charlatades we should be most surprised to see a university course in floor sweeping. We must not be persuaded, by the extraordinary and wholly commendable motivation of our students, to forsake fundamental academic considerations such as the teaching of well-argued theories and of rigorous mental disciplines. We must continue to design and present courses which in themselves are at the tertiary level and which represent a viable attempt to teach according to appropriate and nonconflicting objectives. I would emphasise that I do consider that the course, M252, of which I spoke earlier, is appropriate to a university. Nevertheless, it is true that it failed a number of its students by attempting to satisfy a demand that could be better satisfied elsewhere, that is, it did not meet the demand for computer awareness at a fairly superficial level. It also appeared to fail some other students who wanted a service type course to give them knowledge and a set of skills which they could apply in other fields. It is a debatable point whether or not this was a pedagogic, or rather andragogic, failure. If may be is essential. Perhaps the course designers were right not to pander to the all too human desire for easy credit.

What I would urge most strongly at this stage is that open higher education must remember that it is in the higher education sector. As we have seen there are different directions we may take, such as the theoretical computer science or the more commercially oriented data processing approaches. So long as any course or profile of courses is clearly thought out, within one of these sorts of direction, with consistent objectives then the product will justify itself even though it may only attract a small proportion of the total market for computing courses. In ideal conditions the Open University would offer a viable profile in a number of different directions. In the existing financial climate this is clearly not possible for the Open University or any other such institution, so I would counsel, we should limit our objectives and do well what we do. We must accept that no individual institution can expect to satisfy more than a small part of the total market for computing education.

Is It Realistic to Offer Computing in an Open, Distance Teaching Environment?

As a last section to this paper I would like briefly to explore some problems which exercised our minds during 1983 as we, the OU Computing Discipline, contemplated the difficulties both tutors and students had experienced with M252 in the previous year. We asked - just how possible is it to teach computing and computing related subjects to any depth in a distance teaching environment? Also, to what extent does open entry to such courses present problems? I propose to attempt an answer to both these questions as I believe that the distance teaching problems can affect the quality of open-ness.

The most apparent problem with teaching computing at a distance is providing resources for adequate hardware*; for terminals and/or microcomputers and for suitable communication links. There are many possible ways to try to reduce the costs. One is the conventional Open University approach of regionally based study centres with terminal facilities shared by many students. TM222, The Digital Computer, has now opted to lend all students a purpose-built microcomputer, HEKTOR, for use at home. Whatever the route one takes, hardware is still quite costly and imposes a limit on the number of student places that can be made available for a single course presentation, unless students are asked to buy their own facilities. At current prices this option closes off computing courses to the poorer students, thereby compromising open entry. If machine facilities drop to a price comparable with books then this might become a viable alternative. For the time being it is not. We may assume that for the next few years hardware resources will impose a ceiling on the student intake. The Open University's response to this is to impose quotas which ensure a roughly fair distribution of places throughout the country. Those who have been Open University students longest are given first place in the queue. Within these constraints entry remains open. However, financial pressure from the British government has resulted in greater concern about the effective use of resources. The more dropouts there are, the lower the effective use of expensive machine resources. One argument says that open entry admits students who want to take computing courses for the wrong reasons and who will, quite predictably, drop out. Why not, it goes on, impose an entrance test like any other university to reduce the intake of those who will give up the course? This is another assault on open-ness and should be resisted. It seems, then, that financial pressure, still especially severe with respect to relatively expensive computing courses, will continue to put some strain on the principle of open-ness. Let us be pleased that at present the Open University is holding to its principles.

It is worth pausing here to consider some possible criticisms of the argument so far. First, what is the difference between distance teaching institutions and conventional universities with respect to this issue? The problem of making maximum use of expensive

resources surely still applies. My response is that this is true, that it certainly does apply, but that it is not such an acute problem because of centralised facilities with easy access for students. In addition, such an expensive, large scale (i.e. nationwide) infrastructure is not necessary in a conventional environment. Secondly, it may be asked whether expensive hardware is necessary for computing courses. Undoubtedly it would be possible to prepare some theoretical courses, e.g. machine theory, without access to a real machine. However, computing is a laboratory based activity with use of a computer an essential part of most courses. But, if this is so how does it differ from the physical sciences or other engineering sciences? The answer is, not very much! The problems appear particularly acute because demand is so high. It is also worth remembering that there is a limit to what can be taught at a distance in the other sciences. Computing is similarly limited.

Beside the hardware problem there is another interesting difficulty. This is the ability to teach sound computing disciplines (essential to all computer users whether computer scientists, applications programmers in commerce or homebased amateurs). It is aggravated by press coverage which encourages people to believe that all computing is easy. This is not to say that it is intrinsically hard. It may not be the right subject for everybody, as indeed nuclear physics, music or foreign languages are not for everybody. Much computing teaching is based on developing problem solving skills. The first two practical computing components of M252 are called Problem Solving 1 and 2. Perhaps we are not yet, as a public, attuned to this. However, given innovative teaching and adequate staffing this need not be an insuperable hurdle. It is like teaching good laboratory skills for any subject, very tricky to do well at a distance. John sparkes makes the point clearly saying,

"The learning of skills, however, always requires practice, and teaching them therefore requires a means whereby an experienced practitioner can observe and correct a student's attempts. Face-to-face sessions are the most-versatile, but written assignments, computers, telephones, etc, can be used to teach selected kinds of skills, and must be deployed in a distance learning institution".¹³

In due course though, with the development of sophisticated intelligent knowledge based systems to support the teaching of problem solving and program design it is quite possible that these particular difficulties with respect to teaching programming will be overcome and computer assisted learning (CAL) will actually make it easier to teach computing at a distance than it is to teach the natural and engineering sciences at present. Currently, CAL techniques are effective for drill and practice exercises, but have not widely broken through the barrier of providing intelligent responses on the basis of a stored knowledge base. Once the price of hardware, and hopefully software, drops and the sophistication of CAL software rises, then the pressures on open entry to computing courses will be relieved as they become more cost-effective.

In summary then I have argued that in the absence of clear national objectives with a policy corollary for education, the designers of the tertiary computing curricula must choose their own direction. I have further argued that it is particularly important in open institutions where there is a high and sometimes misplaced demand for such courses that the course designers develop material that does not attempt to follow demand but which leads it in an academically respectable way. The difficulties experienced at the Open University with the course M252 bear this out. Finally, it has been argued that there are no greater difficulties in teaching computing than the other sciences. Indeed, it seems most probable that future technological and economic developments will mitigate a number of the problems which have arisen at the Open University.

References

- (1) Stuart Macdonald,
"Technology Beyond Machines" in **The Trouble with Technology**, (eds) S Macdonald, D McLamberton and T D Mandeville, Fames Printer (Publishers), London 1983.
- (2) Barry W. Boehmn,
Software Engineering Economics, Prentice-Hall, Englewood cliffs, N.J., 1981.
- (3) D.L. Slotnick and J.K. Slotnick,
Computers, Their Structure, Use and Influence, Prentice-Hall, Englewood Cliffs, N.J., 1979.
- (4) The Report of the Alvey Committee
"A Programme for Advanced Information Technology", HMSO, London, 1982: 59-64.
- (5) National Technology Strategy Draft,
 Department of Science and Technology, Canberra 1984.
- (6) The Report of the Alvey Committee, *op cit*, 62.
- (7) Richard H. Austing, Bruce H. Barnes, Della T. Bonnette, Gerard L. Engel, and Gordon Stokes, (eds),
 Communications of the Association for Computing Machinery, Vol 22, No 3, March 1979, *"Curriculum '78: Recommendations for the Undergraduate Program in Computer Science - A Report of the ACM Curriculum Committee on Computer Science"*.
- (8) Queensland Institute of Technology, Computing Studies Handbook, Brisbane, 1984.
- (9) Jay K. Nunamaker Jr., J. Daniel Couger and Gordon B. Davis,
 Communications of the Association for Computing Machinery, Vol 25, No 11, November 1982, *"Information Systems Curriculum Recommendations for the 80s: Undergraduate and Graduate Programs - A Report of the ACM Curriculum Committee on Information Systems"*.
- (10) I. Oliver, D. Abel, P. Bailes, D. Margetson, C. Sauer,
"Informatics at Griffith University" to be published in the Proceedings of the 11th Australian Computer Conference, 1984.
- (11) Personal Communication from the M252 Course Manager to C. Sauer dated May, 1984.
- (12) Alan Woodley and Malcolm Parlett,
"Student Drop-out", **Teaching at a Distance**, No 24, Autumn 1983: 2-23.
- (13) John Sparkes,
"University Teaching at a Distance is a Multi-Media Business", **Teaching at a Distance**, No 22, Autumn 1982: 52-54.

PLENARY SESSION IV:
Graduates' Employment

Main Paper (English)

OPEN HIGHER EDUCATION AND GRADUATES' EMPLOYMENT*

Open Universities are now being created in a growing number of countries. Hence a great diversity of institutional characteristics, and of national contexts. A typology could be useful in order to make comparisons and generalisations meaningful.

My remarks will mostly deal with the profound change brought by the international economic crisis in the employment prospects for Higher Education Graduates, with particular reference to Open Higher Education Institutions (OHE).

Experiments in O.H.E. are too recent to permit Graduate Employment surveys to be made in sufficient numbers so that a "state of the art" can be done. Such studies would be highly desirable for many purposes: they would show whether O.H.E. is distinct from the general situation of graduate employment market.

For intercountry comparisons, some questions appear to be of importance: 1) How far is O.H.E. to open? There is a wide diversity, from completely free admission to the most restrictive procedures based on quotas, disciplines or academic requirements. 2) What are their main objectives? Vocational? Meritocratic? Democratic? In the latter case, what is their target population? Secondary school leavers, or adults? 3) What is the overall employment situation in the country concerned? For H.E. graduates and for other level of skills?

Theoretical Aspects of Graduate Employment

In the decade of the 50's the debate was focussed on the respective merits of three different approaches:

- the "rate of return" approach, based on "human capital" theory, and on the assessment of rentability of education through an economic analysis of wage differentials by educational levels and types;

- the "Manpower approach," based on complementarity relationships between the occupational/educational structure of manpower and economic indicators (manpower technical coefficients);

- the "social demand" approach, based on assessment (and forward projections) of student enrolment trends.

Progress of empirical research in the 60's has questioned the validity of each of these three methods of educational planning and consequently the validity of their underlying theories.

Some Implications of the World Crisis

Presently, the world economic crisis is forcing all of us (economists, educators, planners, administrators or decision-makers) to reconsider education/employment relationships in this new context. We have to take account of the drastic change which has

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occurred in graduate employment as well as in the skill requirements of the economy in relation to trends on the supply side.

1. Declining trends in financial resources. Is O.H.E. more vulnerable than the rest of the H.E. system? Some factors to be considered are total expenditure, cost per student, cost per graduate, cost-benefit analysis (based on wage differentials);

2. The "unlimited" demand for graduates of the 50's and 60's has been replaced (progressively or abruptly) by a "surplus" market in most disciplines and most countries. Is this a temporary phenomenon, or a structural, long-lasting characteristic of the economy? Impact of technological progress has to be considered, on the labour market as well as on the HE system.

Can we avoid these embarrassing issues in passing them to those in charge of economic development policy? This would imply a drastic rejection of the systemic approach which has been developed since the 50's namely what has been called the "human resource development" approach. It would also imply to enhance the privileges of graduates in a "zero-sum" game. We need more empirical research in order to be able to assess what is the nett result of new demand for skills and displacement of obsolete skilled labour.

What are the medium-term trends?

1. Economic crisis appears to be a long-lasting trend, which has a negative impact on employment prospects.

2. Technological progress has become so rapid that its manpower consequences are no longer smoothly absorbed by the replacement of retiring workers by new entrants.

3. In developing countries, the demographic pyramid is such that the replacement needs are negligible, especially for skilled manpower; in contrast, younger generations are continuously growing.

4. Educational development in the past 25 years results in a more than proportional increase of secondary school leavers and of graduates.

These conflicting trends in supply of, and demand for, graduates will continue to exert a growing pressure on the labour-market with consequences on wage differentials, competition for scarce jobs, etc. They will also have consequences on the educational systems, not speak of the social and political implications.

I submit this for consideration and discussion, without pretending to offer a magic recipe. But can anybody pretend to offer ready-made solutions to the major issues of our contemporary world? Whether in the field of national or international economic development strategy or concerning the unemployment issue, etc.?

I prefer to suggest a more modest, but more positive, approach: how could those being involved in OHE experiments contribute to marginal improvements in the present situation?

It may be preferable to face unpleasant facts (or trends) rather than ignoring them, or just to complain about financial constraints, etc. A better knowledge about the crisis cannot but help a search for solutions. In the present economic situation, there is a growing tendency to limit or stop the development of HE, or to define a dual policy (similar to the strategy of a dual economy): a highly selective training system reserved to a privileged minority (within, or preferably outside the HE system), and a "social" educational sector, including the open institutions, with cheap cost, poor quality, low prestige and poor employment prospects.

In the search of more positive and dynamic responses to the present challenges, OHE experiments have some disadvantages (being recent, etc.) compared to traditional

universities; they also have some "comparative advantages" which they can use to their profit.

1. OHE experiments have been created for being innovative. They constantly have to justify their existence: It is therefore a priority for them to give a high priority to a monitoring, evaluation and research system encompassing not only their recruitment procedures and their educational process and outcome, but also the employment market of their graduates (including non-graduates) particularly numerous in open systems). Since many students in OHE are already employed, surveys should identify the specific impact of OHE on the professional career. Participative research methods (including students, teachers and employed) can have positive feedback effects on contents and methods, and more generally on OHE flexibility in adaptation to change.

2. In a long-term perspective, OHE systems can be considered as laboratories for social experiment where new types of social relationships and creativity are explored. New types of institutional and organisational research might be developed in OHE and on OHE viewed as experimental case studies on social innovation.

Dr. Pat's Comments :

With regard to Dr. Debeauvais' article "Open Higher Education and Graduates' Employment", I quite agree of him on the theories and the practical implementation that he gives to us this morning. But I have some points too; especially on the questions that he raised on the first page and on second page, on the theoretical aspects of graduate employment, and on page 5 on students in open higher education who are already employed. So I am going to react to his speech and his paper on three points.

The first one is about the supply and demand which Dr. Debeauvais talked about in the part on the economic point of view. When we talk about the supply and demand, I would like to add at this point that we agree with him on the approaches that we just mentioned, but we would like to extend or to enlarge or give examples from Thailand's situation. On the need of higher educational institutions in Thailand, from the historical point of view up to the present time, we would like to say that we have 3 approaches of demand in Thailand. The first one is manpower demand, which has been very strong from a hundred years ago up to now. Starting from the reign of King Rama V a hundred years ago, we needed a lot of manpower for work, especially, in the government sectors. At that time we opened the higher learning institutes, such as Chulalongkorn University. In 1932, we had a revolution in the government. Two years later, we opened another university an open admission university, The University of Moral and Political Sciences. After World War II, we still had a strong demand for manpower.

On the second points, it is the social demand which is still very strong in Thailand or in Thailand society. The people needed to get a higher education, especially after World War II. This is because the first group of the people who are graduated from higher institutions resulting from the manpower demand that we had set up for the first period, become the elite of our society, and as that they were well-recognized, received high salaries and enjoyed a very good position. So the people just tried to get a higher education after the World War II, not only just to go to the university for higher learning, but to received M.A. and Ph.D degrees. They have thought that if they get degrees, good positions, high salaries and prestige in the society will come, which is the opposite of the western world as I am going to point out later.

The third approach that Thailand used is academic demand which is weaker than manpower and social demands. Academic demand is weak in the sense that the social demand is stronger than manpower demand. So this is contrary to the western world in that when we set up the university, the academic demand comes first. So you are going to set up universities or colleges over there to help solve problems in the society, but for us this one comes later and is very weak.

How does the government react or respond to these 3 demands? For the manpower demand, we opened and offer courses and open new branches of open universities and colleges. At the same time, we opened the new open universities such as, R.U. and STOU to meet the demand in the society. We also set up private colleges. An in all this we emphasized the sciences and technology which sometimes overlook the Arts and Social Sciences which we will come to later. To meet the social demands we established two open universities which are suitable for the manpower demand, but perhaps it is going to result in an oversupply. Moreover, for social demand, we have tried to upgrade to degree-granting institutes such as the Teacher Training Colleges which now become institutes that can provide the bachelor's degree for their graduates. And also we have twilight schools, evening schools in both the teacher colleges and in some universities.

For the academic demand, we try to respond in the sense that we grant the funds for research to scholars and teachers in the universities and we also grant the funds to them to pursue their M.A. and Ph.D programs the foreign countries, then coming back to resume their duties. And also we persuade them to write or to produce valuable textbooks as well as valuable articles, but this is still weak because we have a system for upgrading the status of the professors who write textbooks, do research work to become assistant professors, associate professors, and full professors. This is quite an incentive for our professors, but not so much as it should be yet because some of them disagree on the system.

On the second points, I recall that Dr. Debeauvais said that students of higher learning institutions already had hold jobs which is different from our case. We opened R.U., so high school graduates could have a place to study which is different from the ordinary university concept: we established an open university for the people who are already working, housewives, or the people who stay at home, to allow them to get higher education for the sake of their development, and for our country. So at this point, we have different concepts of an Open University from some others which have been opened for those who are already working. At this points, we see as far as graduate employment concerned, we may think that we face a serious problem on this because we produce a lot of graduates. I'd like to say that for the first four classes of our graduates, we do not have much problem. Due to the general public attitude towards our R.U. graduates, I'd like to make two points here.

Some of them say that graduates at R.U. do not have enough self-confidence and on knowledge because the university is open and the communication between the students and the teachers is not enough. The second point is an inferiority complex in the institution because we are new and still an open university. The third point is the public attitude towards the curriculum, the teachers, as well as the graduates. However, we have already produced four classes of graduates and our graduates have spreaded all over the country and proved that they are qualified to work both in the government and in private sectors. Along this line, we have done research on this employment as well as on the satisfaction of the public on how the graduates of our university work. The research recently done by Dr. Sidta Pinitpuvadon and her colleagues, showed that we did not have a serious problem of job opportunity for R.U. students for the first four classes except when they try to choose the better jobs so that they have to wait, and some companies of the private sector need the graduates who have some previous experience, so they have to wait about six months or a year before they can go into the company as well as the government sectors. The acceptance of and the faith in R.U. graduates comes from private sectors more than the government. After the first group of our graduates was well recognized and accepted, the government released a rule that it will employ in the government sectors not more than 2% each year of the incumbency at the time we produced more graduates. So a problem arises at this moment. But as public Opinion holds it now, R.U. graduates are very pleasing in personality and have good human relationships being easy to get along with.

The third point that I want to raise is a question but I do not know if Dr. Dubeauvais will agree or not. We have distant education in higher education, interstudy visits and a workshop on September 23rd last year, and they proposed the question in the UNESCO bulletin, how can the over production of graduates be avoided? The dilemma faced by most open higher education is that, on the one hand there is a high dropout rate and on the other there can be such a large number of graduates that the supply exceeds the demand. So the educational economists tend to criticize investment in distant teaching, especially in open higher education institutes, pointing out that such institutions generate more waste than conventional universities. At the same time, there is a concomitant fear that these

institutions cannot teach effectively, there will be over an abundance of graduates. They suggest that each nation must maintain a balance among its people and not produce too many graduates who cannot find employment. We do not know how can we balance these two things because the philosophy of higher education is to offer the opportunity for the people to study and at the same time, they suggest that we have to balance between the two. If Dr. Debeauvais agrees or disagrees, would he please respond to these 2 points. So in conclusion, in my comments on higher education now, especially in open higher education, we can say on very first point his open higher education will serve in a problem-solving age.

Dr. Thamnoon Comments :

I am deeply honoured to be invited to comment on Dr. Debeauvais. I am not sure I pronounce his name correctly. On the most important topic of graduate employment, most of you may agree with me that Dr. Debeauvais did an excellent job in presenting his paper. It was is most outstanding and was awarded a certificate of appreciation from our dear Prime Minister. My duty here is to comment on an excellent paper. How could I? well, I will not jump on him, even though I may wish to do so.

There are few points to be elaborated since Dr. Pat commented on all the pages. There is nothing left for me. However, before I step down to my seat, convincing you I am not good in English at all and that I might run out of English words, so that perhaps Dr. Jones may help me if I run out of English, I would like to make three points regarding Dr. Debeauvais's paper.

With regard to the size of scale of cost effectiveness, I agree with him. This is nothing to be debated on economic techniques and I'd like to add that the open university concept or open higher education system are operating on so-called "economy of scale". That is, they grow big; they grow larger and larger. In that case, the per-unit cost of running that business is going down. The per-unit cost is falling. Another words, they will operate at the stage of cost-effectiveness, No doubt about that. I'd like to pinpoint a figure. Take the Ramkhamhaeng University case. The government subsidies R.U. at ฿ 1,500 per person a year. In American money is more or less \$75 per person. This recent figure is from fiscal year 1984, while at another institution--a closed university--the government provides ฿ 21,000 or roughly \$10,000 per person. You can say the reason why we operate an open university in its cheaper cost.

Point No.2, regarding economic techniques again, I am not debating that point, but in the Thai case I'd like to remind and to give this information to Dr. Debeauvais--in Thailand, as you see, in developing countries, not only economic feasibility, but political reasons rule. Everything falls into politics. If the politician says "yes", they the project is underway. Let's get back to the past, when the child was born--R.U. in 1971, if you recall. There were a lot of controversies and the Prime Minister at that time said, "Yes." He gave the green light and the project was underway to become what is R.U. at the present time. Again in 1978 and 1979, Sukhothaimatirat Open University was established. To be frank, we have to accept the truth, we are in the same job. We have good cooperation, but on a competitive basis. It sounds funny to me, but I'd like to say that this happens in developing countries like Thailand. We do the same job but in different ways, and our product should be different, but we more or less goes together: the term is homogenous, I believe.

In point No. 2, I'd like to point out that since the number of government jobs is declining, we're lucky to have a rector who is an advisor to the Prime Minister. The government cuts jobs. The government jobs are going to be set up at a 2% increase annually.

That means that we have a freeze policy or government jobs. My profession is economist, but today I'm not sure--university lecturer. I'd like to suggest that we'd tell our students to move away from government jobs and to get a job somewhere else, in the private sector or to go to France, not to the Middle East.

The final points, No. 3: we have spend a lot of money for 23 years on the economic development process and economic change, but it will not absorb our graduates from open and closed universities. The surplus of our graduates will be unemployed. What does it mean by 'trade-off? The more graduates now, the more unemployment there will be. That is the economic theory. I'd like to come to my conclusion. Dr. Debeauvais said in page No. four--open higher institution with cheap cost, poor quality, low prestige and poor employment prospect. Now in Thailand, the a Land of Smile, in my view, I believe that we should have an open university with the least cost, high product, moderate quality. That's our target. It has to be that way because we have what we call "quantity adjustment." Thank you.

Dr. Debeauvais: Well, it is not to the reply, but to say how I appreciate this comment. It seems to me that one advantage of this situation with the world crisis is that we have learned to be an expert, to be more modest that we used to be before. When we were facing the continous growth, at least in your country and in many of the countries, we should be more modest. We have to learn from the experiences of all the countries and it seems to me now that no one can propound the major recipe on what we should do either in Thailand or in France or in the other countries. But we are colleagues, we must cooperate. We have to learn because of the great diversity of innovation, like the various university institutions. We have to think, what we benefit from in the particular situation in Thailand? I am impressed by all the figures and also the size of the experiment which has been conducted in Thailand. Very few universities have dared to give such a priority to an open system. In other countries, of course, the open university is less expensive than the traditional system. So you are the extreme case in the social sciences are always very useful and your example is rich in interest. Sometimes innovation is far beyond what the experts have recommended.

Dr. Uthai Comments :

I'd like to make some comments on open higher education concerning the graduates and employment. I believe that if you continue to pursue the philosophy of higher education, it has made a contribution to the democratic, not just political way of life, allowing people in the society to develop and open new avenues to upgradte or to develop themselves to high level, not just in economic, but in spiritual development. In the case that we have a dilemma of graduate unemployment the point I would like to raise is whether this is an advantage or disadvantage? If we have more graduate employment, it would be a crisis for the social development of the nation. If we have non-graduate unemployment, I think it might be more harmful to the sociaty than graduate employment. The graduates themselves are the key factor who can solve the problem, but there are some other parties involved. From my point of view, there are four parties involved in this situation. The first one is the government; and the fourth one is the society. Each party has to do his own job and work together in order to solve the problem. If we desire to put a burden on the institution alone, I think that we cannot solve the problem and we will have a vicious circle that we have to run around and through the burden on each other. The government should be the first one to think about how to open the job market, so that there will be more jobs for the graduates.

If we have more jobs available, either in the government sector or in the private sector, we can project on the programs, the social trends of growth and changes. All of these aspects should be included either in the program or in the institutions. The most important one is the graduates themselves. If they pursue higher education just for the sake of knowledge, but have no positive attitude to work, we would not accomplish much. To solve the problem of the students, we have to start from the beginning, not from the end. If we start from the end, there is no way we can solve the problem.



L'ENSEIGNEMENT SUPERIEUR OUVERT ET L'EMPLOI*

Les expériences d'enseignement supérieur ouvert (E.S.O.) se sont multipliées sur tous les continents au cours des quinze dernières années. Il est donc intéressant de comparer les expériences acquises dans les divers pays. L'évolution de ces expériences en relation avec les problèmes d'emploi n'a pas encore donné lieu à beaucoup de recherches monographiques, encore moins à des études comparatives.

Ces expériences sont très diverses et les pays où elles ont été créées ne le sont pas moins. On peut donc poser une question préalable : est-il possible de procéder à des généralisations et à des comparaisons pertinentes à propos d'institutions aussi diverses? Ne serait-il pas plus adéquat d'examiner le cas de chacune de ces expériences dans leur contexte national? D'autant plus que la notion d'**ouverture** est relative, et qu'elle ne prend sa signification que par rapport aux modalités d'admission des établissements d'enseignement supérieur du pays concerné.

Pour bien comparer, une typologie des expériences d'E.S.O. serait utile. Mais elle sortirait du cadre de mon exposé. Je me contenterai donc de mentionner deux facteurs importants pour mon sujet:

1. Les modalités d'ouverture de l'E.S.O. : les expériences nationales varient du type le plus ouvert (admission sans restriction de nombre ou de connaissances) au plus sélectif (admission limitée à un public délimité, et/ou à ceux qui satisfont à des examens plus ou moins sélectifs). L'importance relative des effectifs de l'E.S.O. par rapport à l'ensemble de l'enseignement supérieur du pays est également à prendre en considération, ainsi que le caractère plus ou moins ouvert de l'ensemble du système national d'enseignement supérieur.

2. Les objectifs fixés à l'E.S.O. par les décideurs peuvent être d'ordre social, pédagogique ou économique. Dans le premier cas, la démocratisation de l'accès à l'enseignement supérieur peut à son tour être recherchée en créant la possibilité d'une "seconde chance" pour les adultes (Open University britannique par exemple), ou d'accueillir une partie des jeunes qui n'ont pas pu être admis dans les établissements d'enseignement supérieur à la fin de leurs études secondaires.

En outre, il faut tenir compte de la conjoncture économique actuelle. Le chômage des jeunes devient un phénomène général et durable; il oblige à repenser les politiques du développement de l'enseignement supérieur, mais aussi de tout le système éducatif et de l'économie. C'est dans cette perspective que je voudrais situer mes remarques.

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Les chercheurs qui étudient les relations entre l'enseignement supérieur et l'emploi ont élaboré dans les années 50 plusieurs notions qui ont suscité beaucoup de débats théoriques, et qui ont dépassé le cadre des spécialistes : l'investissement éducatif, la rentabilité de l'éducation, le capital humain. On a souvent distingué - et opposé - trois conceptions, liées chacune à des techniques différentes de planification de l'éducation :

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- a) le capital humain (rate of return approach);
- b) les besoins en main-d'oeuvre qualifiée et leur prévision (manpower approach);
- c) la demande d'éducation de la population (social demand approach).

Je n'ai pas l'intention de rouvrir ici ce débat de spécialistes, qui me semble avoir perdu son actualité dans la période actuelle.

Si on se place au point de vue de ceux qui sont actuellement impliqués dans les expériences d'E.S.O., on peut admettre que ceux-ci ne peuvent pas réfléchir sur leur action sans s'intéresser au devenir professionnel des étudiants, quelles que soient les fonctions qu'ils exercent (comme enseignants, administrateurs, planificateurs ou décideurs) et quelles que soient leurs positions envers les différents objectifs éducatifs et les options de politique (méritocratique, technocratique, démocratique, etc).

Les relations entre l'enseignement supérieur et l'emploi sont évidentes : dans tous les pays, une des tâches principales de l'enseignement supérieur est de former les cadres supérieurs dont l'économie a besoin. Cette fonction a été prise en compte souvent de façon prioritaire dans tous les pays qui ont cherché à planifier le développement de leurs ressources humaines. Cette planification des besoins en main-d'oeuvre qualifiée a donné lieu à de nombreuses expériences nationales.

Il n'est pas facile de tirer des conclusions claires de ces expériences. On peut distinguer deux opinions opposées :

- les uns estiment que les erreurs de prévision ont démontré l'impossibilité (et la vanité) de faire de telles prévisions. C'est l'opinion la plus répandue chez les économistes adhérant aux conceptions néo-classiques;

- d'autres soutiennent que les erreurs ne sont pas si graves que les premiers le prétendent, qu'il est préférable d'accepter le risque de faire des erreurs plutôt que de renoncer à planifier, que les méthodes et les théories progressent par la réflexion sur les erreurs et par les améliorations qui en résultent; les partisans de cette opinion sont nombreux parmi les planificateurs, les administrateurs et les décideurs, plus sensibles que les théoriciens aux exigences pratiques de la politique de développement et à la pression des urgences.

C'est ainsi qu'on peut expliquer ce paradoxe ; alors que beaucoup d'économistes soutiennent qu'il est théoriquement incorrect, et pratiquement impossible, de faire des prévisions chiffrées à long terme des besoins en main-d'oeuvre par niveaux et par types de qualification, les décideurs continuent à fixer comme objectifs de l'enseignement supérieur la formation des cadres supérieurs, à demander aux planificateurs de chiffrer ces besoins et aux éducateurs d'adapter les objectifs pédagogiques aux besoins en main-d'oeuvre de l'économie.

On peut maintenant faire des évaluations rétrospectives des prévisions de besoins en main-d'oeuvre. On pourrait aussi examiner les résultats des recherches faites sur les relations de l'enseignement supérieur et de l'emploi, sur la base d'enquêtes et de collectes statistiques de plus en plus nombreuses. On dispose en effet d'un assez grand nombre d'études de cas nationales et d'études comparatives sur les cadres supérieurs, leurs emplois, leurs salaires, et même leur carrière et leur mobilité, dans une grande variété de pays. De telles synthèses comparatives sont très utiles, mais elles dépasseraient le cadre de mon exposé.

Ici, je voudrais proposer une question pour la discussion : la crise économique actuelle place les relations éducation-emploi dans un contexte nouveau, qu'on pourrait résumer ainsi : est-il encore opportun de poursuivre l'expansion de l'enseignement supérieur, dans une période où la crise des débouchés pour les diplômés ne paraît pas en voie de solution? Dans la mesure où les expériences d'Universités ouvertes ont été entreprises pour élargir l'accès à l'enseignement supérieur, cette question concerne bien notre Conférence.

L'IMPACT DE LA CRISE

La crise étant mondiale, c'est dans presque tous les pays qu'on observe les difficultés d'emploi croissantes pour les diplômés de l'enseignement supérieur. Mais la plupart des études récentes sur l'emploi tendent aussi à montrer que la situation des nondiplômés paraît encore plus difficile. On est alors ramené à des questions cruciales : le niveau de la formation exerce-t-il une influence positive sur les chances d'obtenir un emploi, sur les salaires et sur la mobilité professionnelle? Ou est-ce plutôt la spécialité de la formation, ou encore sa qualité, qui exercent cette influence?

Il n'y a pas de réponse à ces questions sans recherches préalables. On évoque plus loin les types de recherches qui paraissent souhaitables à cet égard.

Mais une autre question est encore plus fondamentale: même si l'on parvient à établir et à préciser les effets qu'une formation dans l'enseignement supérieur exerce sur l'emploi, s'agit-il d'avantages pour la société, ou seulement pour les individus? On peut en effet concevoir qu'une formation confère à celui qui la reçoit un avantage relatif dans une compétition pour les "bons emplois" dont le nombre serait fixé. Dans une telle perspective de "jeu à somme nulle", il serait à craindre que les Universités Ouvertes ne soient mal placées par rapport à leurs concurrentes, qui ont pour elles l'avantage du prestige et des traditions.

A moins que des études comparatives du type "coût/efficacité" ne puissent montrer que l'E.S.O. peut rivaliser avec les autres, ou même l'emporter sur les établissements d'enseignement supérieur comparables. Mais les rares recherches existantes sont peu concluantes.

Sur le plan de l'emploi global, il est difficile d'être optimiste sur les perspectives des débouchés pour les diplômés:

- D'une part, la crise économique actuelle ne semble pas près de disparaître à moyen terme.
- D'autre part, la crise conjoncturelle paraît se doubler d'une crise structurelle, liée à des évolutions technologiques durables. Même si les technologies nouvelles font apparaître de nouveaux besoins en qualification, ceux-ci ne semblent pas assez nombreux pour compenser quantitativement les emplois supprimés; du moins à moyen terme.
- A ceci s'ajoute, pour les pays en développement, le poids de la démographie: des jeunes générations sans cesse plus nombreuses se présentant sur le marché du travail où il y a peu de vacances d'emploi par départs à la retraite.
- En outre, le résultat du développement récent des systèmes éducatifs entraîne un accroissement plus que proportionnel des jeunes qui terminent les cycles d'étude secondaire ou supérieur.

Ces évolutions divergentes de l'offre et de la demande de diplômés de l'enseignement supérieur ne peuvent que créer des tensions croissantes sur le marché du travail; elles ont aussi des répercussions sur le système éducatif, ainsi que sur le plan social et politique.

La tentation est alors pour chacune des parties de l'ensemble de s'isoler des autres, à rechercher des solutions sectorielles, et à rejeter en dehors de sa propre sphère les problèmes nouveaux et menaçants. C'est ainsi qu'on entend de plus en plus souvent dire qu'il n'appartient pas au système éducatif de résoudre les problèmes qui se posent en dehors de lui, dans l'économie ou sur le marché du travail.

On constate des tendances analogues en matière de développement économique. De même que certains se résignent à une "économie à deux vitesses" où les efforts seraient concentrés sur la fraction moderne et dynamique, certains préconisent une politique

éducative dualiste, avec un secteur sélectionnant sévèrement les élèves, mais aussi les meilleurs moyens en hommes et en crédits; l'autre secteur aurait une fonction "sociale" déliée de l'économie.

Dans une telle perspective, les Universités Ouvertes auraient un rôle analogue à celui qui serait réservé aux établissements d'enseignement supérieur de second choix : une fonction de gardiennage dans le pire des cas, une fonction purement sociale et culturelle dans une hypothèse moins pessimiste.

Si on ne souhaite pas se résigner à cette perspective dualiste et qu'on refuse aussi de se replier sur un secteur éducatif isolé, et sur des objectifs pédagogiques indépendants du reste de la société, quelles solutions peut-on envisager?

Il est sans doute illusoire, ou du moins prématuré d'espérer construire une nouvelle théorie générale unitaire englobant l'économie, l'emploi et l'éducation comme on avait cherché à le faire dans les années 50 et 60.

Il n'est peut-être pas très réaliste de "délirer" entièrement le système éducatif de la formation professionnelle et du marché du travail.

Il serait aussi peu crédible d'espérer élaborer une théorie satisfaisante des relations éducation-emploi susceptible de guider une politique nationale de formation des cadres, alors que les politiques de développement actuelles ne sont pas encore parvenues à inclure des politiques d'emploi acceptables.

dans l'immédiat, une politique à court terme pour la période de crise pourrait être inspirée par le souci de s'adapter de façon dynamique à des temps difficiles: les progrès à faire sont le domaine d'une meilleure information sur le système de formation (systèmes d'évaluation) et sur l'insertion des diplômés (et des non-diplômés, particulièrement nombreux dans les systèmes de formation ouverts) dans la vie active. Ceci peut conduire à des politiques d'innovation, et d'aide des pouvoirs publics aux innovateurs. L'E.S.O. étant lui-même le produit d'une innovation, est particulièrement bien placé dans ce domaine.

A plus long terme, un problème essentiel, qui est posé aux établissements d'enseignement supérieur, est celui de la contribution positive qu'ils peuvent apporter pour faire face aux défis actuels de la crise mondiale, et au-delà de la crise, à la solution des problèmes majeurs qui se posent au développement mondial. Les Universités Ouvertes ont des "avantages comparatifs" à exploiter, si on les considère comme des laboratoires d'expérimentation sociale dépassant certaines des barrières sociales actuelles: étudiés sous cet angle, leurs expériences peuvent être d'une grande richesse.



Supporting Paper I

OPEN HIGHER EDUCATION AND GRADUATES' EMPLOYMENT : THE CASE OF SUKHOTHAI THAMMATHIRAT OPEN UNIVERSITY*

Thailand covers a land area of 513, 115 square kilometres with a population estimated at 50.4 million in 1984. Approximately 85 per cent of the people live in rural areas, with the remaining 15 per cent clustered mainly in Bangkok, the centre of social, commercial, and political life. The majority of the labour force is engaged in agriculture. Women make up approximately 85 per cent of the labour force.

The economy of Thailand is based on agriculture. Rice is the most important export, followed by rubber, maize, tin, jute, kenaf, teak, and cassava. Thailand is one of the few developing countries which is also a net exporter of food products in large volumes.

Over the past decade there has been an increasing number of firms producing construction materials, iron and steel, electrical goods, petroleum, chemicals, plastics, and canned fruit. Other major industrial products include sugar, gunny bags, cement, paper, vegetable oils, automobile tires, iron and steel, textiles, silk, and gems.

Establishment of Sukhothai Thammathirat Open University

In Thailand mass education is conspicuous at the primary and secondary levels, but the proportion of those who receive the benefit of university education is comparatively limited by the facilities available to them to continue their education beyond the secondary level. Like those in other countries, parents in Thailand have always considered higher education a route to increased wealth and higher social standing. Many of them have tried their best to provide it for their children because of their conviction that the rewards at the end are well worth the effort.

Before the establishment of Sukhothai Thammathirat Open University in 1978, shortage of university places had always been a major problem for every Government. Each year institutions of higher education were asked to improve their capacity to admit a greater number of students, and this despite the existence of Ramkhamhaeng University established in 1971 to cope specifically with the increased demand for higher education. The dramatic rate of increase in the number of secondary school graduates in the last decade, however, prevented them from undertaking further expansion to accommodate more and more students. Besides, in a period of increasing economic stringency, great improvements and large-scale expansion were far from being possible. Despite serious efforts made, the problem of university enrolment remained as chronic and as grave as ever.

The growing concern for life-long education was another major factor contributing to the establishment of an institution of distance learning in Thailand. It was felt that the method of imparting knowledge employed and the programmes provided by conventional universities were inappropriate for working people seeking higher education. They needed alternative study possibilities or a new system of education that would enable them to study on their own without class attendance and to continue their normal occupations while undertaking university studies. One such possibility was the provision of distance higher education by an open university. Determined to come to grips with the problem of access to

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higher education and lack of appropriate in-service professional enrichment, the Government decided to set up an open university.

After three years of planning under the guidance of Professor Dr. Wichit Srisa-an, the Open University was finally created by Royal Charter on the 5th of September 1978, under the name of "Sukhothai Thammathirat University", as an open educational institution having as its objectives, "the provision of education and promotion of academic and advanced professional knowledge, research, provision of academic service to society and preservation of culture."

STOU's Distance Education System

The establishment of Sukhothai Thammathirat Open University, or STOU for short, marked the first adult home-based university studies programme to operate in Thailand. STOU holds to the principle of life-long education and aims at improving the quality of life and work of the general public in response to the ever increasing demand for higher education. The University seeks to provide equal access to university education for people in all walks of life as an extension of the Thai Government's policy of the democratization of education, making the best possible use of the existing infrastructure in the country to develop human resources.

The University's general method of operation is spelled out in Section 6 of the Sukhothai Thammathirat Open University Act of 1978 which states:

"The education provided by the University shall be given through correspondence, radio and television broadcasting or other media which will enable students to learn by themselves without having to attend classes. Eligibility for enrolment and admission to the University shall be in accordance with the regulations prescribed by the University Council and shall be without entrance examination."

STOU employs the distance education system to impart instruction. To enable the student to undertake independent study with a minimum of assistance, the University divides each six-credit course into 15 units, a unit requiring one week of study, and uses a combination of different media integrated in such a way as to render teaching as effective as possible.

The teaching media STOU relies on consist of printed self-instructional course materials, audio cassette tapes, and a certain number of radio and television broadcasts along with varying amounts of face-to-face tuition at local and regional study centres. Although printed material constitutes the principal medium of instruction, it is deemed advisable to provide audio cassette tapes as well as radio and television programmes as support media to reinforce the content of the print, to stimulate the student, and to make him feel less isolated in his study.

It should be pointed out that in a developing country like Thailand, mass communications are not advanced enough; nor are they extended to all areas of the country. As a result, and for economic reasons, STOU has not adopted a large-scale use of broadcast media as a teaching medium.

All in all, students are expected to study from 15 to 18 hours a week. Some 70 percent of the time is spent on reading the printed texts, the rest being devoted to listening to weekly radio programmes, watching three-to-five television programmes for each course, and attending face-to-face tutorial sessions at study centres, once every four of five weeks on weekends, totalling some ten hours per course.

Programmes of Study

In accordance with its objectives and belief in life-long education, STOU offers two types of programmes of study : degree and non-degree programmes. The course offerings are related to the major national needs and their compatibility with the University's distance teaching system. For non-degree programmes, specially designed courses are offered as an educational service to the general public so as to promote personal development and professional competence. With the belief that people need to be educated from birth to death and that education constitutes one of the main necessities of life, STOU makes great efforts to design courses for prospective learners to choose according to their individual needs.

Aware of the importance and desirability of enabling working people to develop their skills and gain the kind of knowledge essential for their professional competence, STOU launched its first Continuing Education Programme in June 1981 by offering a number of courses, selected from the degree programme, to whoever wanted to participate in this programme, regardless of age, qualification or profession. The University hopes that eventually it may be possible for anyone over 20 to have open entry into some degree programmes, regardless of qualifications.

The following is a detailed list of the various degree programmes:

Programmes	Degrees
School of Educational Studies	
Four-Year Programme	
Elementary Education	B.Ed.
Secondary Education	B.Ed.
Two-Year Programme	
Elementary Education	B.Ed.
Secondary Education	B.Ed.
Educational Administration	B.Ed.
School of Management Science	
Four-Year Programme	
General Management	B.B.A.
Two-Year Programme	
General Management	B.B.A.
Construction Management	B.B.A.
School of Law	
Four-Year Programme	
Law	LL.B.
Three-Year Programme	
Law	LL.B.
School of Economics	
Four-Year Programme	
Economics	B.Econ.
Three-Year Programme	
Economics	B.Econ.

School of Health Science**Four-Year Programme**

Health Management
Public Health

B.P.H.
B.P.H.

Two-Year Programme

Health Management
Public Health
Nursing

B.P.H.
B.P.H.
B.N.

School of Home Economics**Four-Year Programme**

Community Nutrition
Child and Family Development

B.HE.
B.HE.

School of Agricultural Extension and Co-operatives**Four-year Programme**

Agricultural Extension and
Co-operatives

B.AgExt. Coop.
B.AgExt. Coop.

Two-Year Programme

Agricultural Extension and
Co-operatives

B.AgExt. Coop.
B.AgExt. Coop.

School of Political Science**Four-Year Programme**

Political Theories and Techniques
International Relations and Comparative Politics

B.A. in Pol.Sc.
B.A. in Pol.Sc.

Three-Year Programme

Political Theories and Techniques
International Relations and Comparative Politics

B.A. in Pol.Sc.
B.A. in Pol.Sc.

School of Communication Arts**Four-Year Programme**

Communication Arts

B.Com.Arts.

Three-Year Programme

Communication Arts

B.Com.Arts.

In-Service Education and Training Programmes

From the beginning STOU has intended to reach out to the Thai community at large in the remotest areas. It is no exaggeration to say that, thanks to its distance learning system, STOU finds itself in a comfortable position to serve various organizations, both public and private. Distance learning has made possible the co-operative projects with such governmental departments and private concerns as:

(i) **The Police Department** in establishing a law degree programme for non-commissioned police officers seeking promotion to the rank of commissioned police officer;

(ii) **The Department of Lands** in providing staff development for those without a degree so that they might have a better knowledge of land and property law;

(iii) **The Department of Local Administration** in establishing an in-service training and education programme for the Department staff as well as for sub-district and

village-level health officers and administrators as well as their wives and others involved in local administrative work in order to increase their knowledge and work capability and improve their leadership

(iv) **The Office of the National Committee on Elementary Education** in developing elementary school administrators throughout the country;

(v) **The Department of Non-Formal Education** in enriching provincial public libraries throughout the country with STOU publications and other educational materials including STOU radio and television programmes, recorded on audio cassette tapes and video tapes;

(vi) **The Ministry of Agriculture and Co-operatives** in upgrading the qualifications of the Ministry's agricultural extension and co-operatives officials; and

(vii) **The Bangkok Bank** in training the Bank's staff development officers to produce self-instructional texts to be used in staff development programmes at the Bank and in admitting a selected number of Bank employees as associate students to enable them to be promoted or assigned to more attractive positions.

Thus, in the midst of a constantly changing world, all individuals throughout the country at any stage in their careers are likely to be assured some further education and training through distance-learning methods at any phase in their lives. Whatever courses that the University offers and that meet their needs, they can study at their convenience and for any length of time desired.

Student Profile

STOU admitted its first batch of students in December 1980. In that inaugural year there was a total of 82, 139 students, including 68 Buddhist monks. In 1982, new Schools were added and 69, 561 new students were admitted. In 1983, the University admitted 50, 110 more students. In 1984, a tenth School was added and the University enrolled about 90,000 more students. This brought the total number of students to about 300,000.

1. Total Enrolment

Enrolment in each semester varies. Normally the number of students enrolled in the first semester is greater than that in the second semester. In the first semester of the 1984 academic year, there were 87, 741 students, enrolled in nine Schools. The distribution of students by Schools is presented in Table 1.

Table 1 Enrolment by Schools, First Semester, 1984

Schools	Number	Percentage
1. Educational Studies	21,981	25.05
2. Management Science	23,781	27.10
3. Law	18,936	21.58
4. Health Science	4,656	5.31
5. Economics	2,774	3.16
6. Home Economics	3,153	3.59
7. Agricultural Extension and Co-operatives	4,775	5.44
8. Political Science	3,358	3.83
9. Communication Arts	4,327	4.93
Total	87,741	100.0

From the table above it can be seen that the Schools that have the greatest numbers are ranked 1-3 in the following order:

School of Management Science	(27.10%)
School of Educational Studies	(25.05%)
School of Law	(21.58%)

The distribution of new students in each academic year in the various disciplines appears in the following table.

Table 2 Distribution of New Enrolments by Schools

Schools	1981		1982		1983		1984*	
	Number	%	Number	%	Number	%	Number	%
Educational Studies	75,334	91.72	10,328	14.85	12,063	24.07	21,981	25.05
Management Science	6,805	8.28	16,225	23.32	11,163	22.28	23,781	27.10
Law	-	-	29,827	42.88	14,913	29.76	18,936	21.58
Health Science	-	-	3,985	5.73	2,061	4.11	4,656	5.31
Economics	-	-	1,553	2.23	1,932	3.86	2,774	3.16
Home Economics	-	-	2,287	3.29	2,353	4.70	3,153	3.59
Political Science	-	-	-	-	3,731	7.45	4,775	5.44
Agricultural Extension and Cooperatives	-	-	5,356	7.70	1,896	3.78	3,358	3.83
Communication Arts	-	-	-	-	-	-	4,327	4.93
Total	82,139	100	69,561	100	50,112	100	87,741	100

*As of 18 June 1984

Table 2 indicates the number of new students enrolled in the various programmes. There appears to be a significant difference for the academic year 1980 - 81 when the School of Educational Studies had, by far, the highest enrolment figure-75,334 (91.7 per cent of all students). By the academic year 1982-83, the University had enrolled new students in five new disciplines, with the largest enrolment in the School of Law-29,827 (42.9 per cent of the total). In the academic year 1983-84 the School of Law once again enrolled the most students-14,913 (29.8 per cent of the total).

In the academic year 1984 the University enrolled more students than ever before - 87,741. Every discipline had an increase in the number of students. The discipline with the highest enrolment was Management Science with 23,781 students (27.1%). Next was Educational Studies with 21,981 new students (25.0%) followed in the third position by Law with 18,936 students (21.58%)

2. Distribution of Students by Regions

When the numbers of students are compared to the population at large, it can be seen that the distribution of students in various provinces turns out to be proportionate to the population of the respective province.

For example, in the northeast region, the area with the largest the number of students in the academic year 1984 was 23,164 or 26.4% of all new students. The details of the distribution of the numbers of new students for each academic year appear in Table 3.

Table 3 Distribution of Students by Regions

Regions	1980-1981		1982		1983		1984*	
	Number	%	Number	%	Number	%	Number	%
Bangkok	9,362	11.4	17,136	24.6	10,573	21.1	14,389	16.4
Central	7,730	9.4	5,403	7.8	4,349	8.7	7,019	8.0
Northern	15,105	18.4	12,187	17.5	9,070	18.1	17,636	20.1
Southern	15,075	18.4	10,138	14.6	7,052	14.1	12,459	14.2
Eastern	4,681	5.7	4,540	6.5	3,306	6.6	5,379	6.7
Western	7,286	8.8	5,181	7.5	4,117	8.2	7,195	8.2
North-Eastern	22,900	27.9	14,976	21.5	11,645	23.2	23,164	26.4
Total	82,139	100	69,561	100	50,112	100	87,741	100

3. Characteristics of Students

3.1 Distribution of New Students by Sex

From Table 4 it can be seen that the disciplines which have the most female students in the academic year 1984 are Health Science (approximately 82.3 per cent) and Home Economics (approximately 92.4 per cent).

The disciplines which have the highest percentages of male students are Law, Economics, Political Science, and Agricultural Extension and Co-operatives which, in the academic year 1984 had the male-student percentages of 88.4, 66.2, 72.9, and 62.5 respectively. The numbers of male and female students in other disciplines are more or less equal; details appear in Table 4.

Table 4 Distribution of Students by sex

Schools	1980-1981		1982		1983		1984	
	Male	Female	Male	Female	Male	Female	Male	Female
Educational Studies	46.6	53.4	43.3	46.7	41.8	52.2	44.9	55.1
Management Science	98.2	1.8	46.5	53.5	40.9	59.1	44.1	55.9
Law	-	-	91.2	8.8	82.6	17.4	88.4	11.6
Health Science	-	-	46.7	53.2	29.4	70.6	17.7	82.3
Economics	-	-	67.7	32.3	56.5	43.5	66.2	33.8
Home Economics	-	-	0.9	91.1	0.7	99.3	0.6	92.4
Political Science	-	-	-	-	76.6	23.4	72.9	27.1
Agricultural Extension and Co-operatives	-	-	89.0	11.0	81.9	18.1	62.5	37.5
Communication Arts	-	-	-	-	-	-	50.7	49.3
All Schools	50.8	49.2	67.2	32.8	55.7	44.3	57.3	42.7

3.2 Distribution of Students by Age

In considering the distribution of students by age, students are classified by age-range groups. The youngest age range is 17-22 and the highest age range is the over-60's group. From Table 5, it can be seen that nearly 60 per cent of the students range in age from 25 to 30.

Table 5 Distribution of Students by Age

Age	1980-1981		1982		1983		1984	
	Number	%	Number	%	Number	%	Number	%
17 - 22	4,171	5.4	5,849	8.4	10,090	20.1	13,160	15.0
23 - 25	19,626	25.6	13,601	19.6	12,094	24.1	24,477	27.9
26 - 30	27,195	35.4	19,963	28.7	12,292	24.5	25,442	29.0
31 - 35	12,358	16.1	13,982	20.1	6,573	13.1	12,194	13.9
36 - 40	6,946	9.1	8,540	12.3	4,051	8.1	6,491	7.4
41 - 50	4,674	6.1	4,972	7.1	3,090	6.2	4,913	5.6
51 - 60	713	0.9	651	0.9	424	0.9	614	0.7
Over 60	73	0.1	66	0.1	22	0.1	12	0.0
No response	974	1.3	1,937	2.8	1,476	2.9	438	0.5
Total	76,730	100.0	69,561	100.0	50,112	100.0	87,741	100.0

Graduates and Employment

1. Occupation at the Commencement of Studies

Before considering the situation of employment for graduates from STOU, it will be appropriate to consider the occupations of those students who began their studies in the inaugural academic year 1980-81. In that first year STOU admitted only those who were already employed. Table 6 shows the distribution of students by occupations at the commencement of studies for each academic year.

Table 6 Distribution of Students by Occupations

Type of Occupations	1980-1981		1982		1983		1984	
	Number	%	Number	%	Number	%	Number	%
Government Service	68,984	83.98	48,457	69.66	29,739	59.4	62,359	71.1
State Enterprise	942	1.15	5,457	7.84	2,953	5.9	5,709	6.5
Private Sector Employment	6,552	7.98	9,659	13.87	7,069	14.1	10,364	11.8
Private Business	275	0.33	1,438	2.07	2,183	4.4	2,458	2.8
Agriculture	43	0.05	89	0.13	567	1.1	351	0.4
Others	57	0.07	932	1.34	1,621	3.2	3,669	4.2
No Employment	5,286	6.44	3,529	5.07	4,260	8.5	2,020	2.3
No Response	-	-	-	-	1,720	3.4	791	0.9
Total	82,139	100.0	69,561	100.0	50,112	100.0	87,741	100.0

From the Table it can be seen that the majority of students who commence studies (approximately 95%) are already employed and that the occupation most are engaged in is the civil service (approximately 60-80 per cent of those who study each year).

Table 7 shows the distribution of students by monthly income at the time of their application for admission.

Table 7 Distribution of Students by Monthly Income

Monthly Income	1980-1981		1982		1983		1984	
	Number	%	Number	%	Number	%	Number	%
Under 1,000 B	526	0.6	1,683	2.4	3,623	7.2	877	1.0
1001 - 2,000 B	14,997	18.3	8,144	11.7	6,793	13.6	10,178	11.6
2001 - 3,000 B	42,452	51.7	24,054	34.6	16,089	32.1	33,868	38.6
3001 - 4,000 B	12,561	15.3	16,300	23.4	9,006	18.0	15,618	17.8
4001 - 5,000 B	4,280	5.2	7,675	11.0	4,807	9.6	8,160	9.3
5001 - 6,000 B	1,024	1.2	4,035	5.8	2,476	4.9	3,773	4.3
6001 - 7,000 B	572	0.7	2,199	3.2	1,571	3.1	2,720	3.1
Over 7,000 B	-	-	3,457	4.9	2,392	4.8	3,597	4.1
No Response	5,726	7.0	2,014	2.9	3,355	6.7	8,950	10.2
Total	82,139	100.0	67,561	100.0	50,112	100	87,741	100

From Table 7 it can be seen that the majority of newly-enrolled students had incomes of between 1001-4000 baht per month, with the highest concentration between 2001-3000 baht.

3. Earning a Living While Studying

The following data about the occupations of students during their period of studies was obtained by distributing census forms, during the period 22nd - 28th of June 1984, as part of an enquiry into the first class of graduates to receive their degrees in 1984.

Table 8 Occupations of Students during Period of Study

Occupations	Number	Percentage
Employee of Private Company	124	3.5
Private Business	20	0.6
International Organization	7	0.2
Government Service	3,171	90.8
Employee of Public Organization	103	2.9
Municipal Worker (Public works)	57	1.6
Unemployed	6	0.2
Not known	6	0.2
Total	3,404	100.0

It can be seen that the majority of those who completed their studies and became the first graduates of STOU in Educational Studies and Management Science (i.e. more than 90%) were already employed. The following table shows the average monthly income by discipline and major subject.

Subject/Branch or Discipline/Major Subject	Monthly Income (Baht)
Educational Studies	3,794.7
Primary/Education	3,781.41
Adult Education	3,882.45
Sociology/Social Studies	3,406.07
Thai	3,429.15
Science	3,087.26
Mathematics	3,112.73
Business Administration	4,474.95
Management Science	5,669.40
Construction Management	5,669.40
Average for all disciplines	4,101.16

It can be seen that the graduates who completed their studies in Educational Studies had monthly incomes which were approximately equal, that is in the range of 3,000-4,000 baht. This income is lower than the income of graduates in Management Science whose monthly income is approximately 6,000 baht per month.

Conclusion

From the data on students commencing their studies at STOU, in the various disciplines, and from the data on the first graduates, who completed their studies in 1983, it can be seen that STOU graduates do not generally encounter unemployment problems. One reason for this may be found in the University's policy which aims at providing educational and professional improvement programmes for less privileged working adults whom no conventional university can cater for. Unlike existing conventional universities, which are open mainly to young people just out of high school, STOU seeks to upgrade working adults to the desirable professional standards. In fact, according to the responses of some 48 per cent of STOU graduates, the knowledge they have acquired has greatly helped towards improving their capabilities in their jobs. On the other hand, students who are unemployed when they commence their studies with STOU are expected to earn a living, one way or another, while studying instead of remaining unemployed.

Thus, all present evidence seems to suggest that since the majority of STOU students are already employed in various occupations, what is likely to await them after graduation will probably be the problem of "underemployment," and not that of unemployment. It is also quite safe to say that those who are not yet employed are likely to find their employment prospects greatly enhanced after graduation. In other words, STOU graduates should not experience any serious unemployment problems.



HIGHER EDUCATION AND GRADUATE EMPLOYMENT IN DEVELOPING COUNTRIES WITH SPECIAL REFERENCE TO INDIA *

Education is a process of the transmutation of the vegetative propensities of the homosapiens to their rationalised and sublimated state, in which he is in harmony with his environments, internal and external. As a thinker he is creative and adds to the wealth of knowledge which leads humanity from darkness to light and as a professional he acquires skill in the technic and produces wealth which enriches the nation.

We should teach at the colleges and universities so that those who are coming for higher education find the training useful and relevant to the jobs when they enter the practical life.

It is true that higher education keeps pace with the growing needs of employment, meets the demand of large sections of population for cultural enfranchisement and is feasible from the standpoint of the material resources and personnel likely to be available for it. Persons with different kinds of training such as teachers, scientists, administrators, engineers, doctors, accountants, business executives, lawyers, social workers, pharmacists and technicians are required by a rapidly developing and modernizing society. So higher education can be demanded in the interest of social justice without neglecting the need of improvement of academic standards at least for accelerating economic growth.

According to University Grants Commission of India, the number of post graduate and research students is about 91,000 for the year.

Before we proceed for discussion, it is necessary to have a summary view of the present situation in India.

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Table I
Facultywise distribution of Colleges.

Faculty	University Colleges	Affiliated Colleges	Total
Arts, Science and Commerce	73	1,542	1,615
Engg/Technology/Architecture	15	83	98
Medicine	5	83	88
Pharmacy	21	-	21
Ayurved	-	10	10
Dental	5	8	13
Nursing	4	8	12
Law	67	52	119
Agriculture	38	32	70
Veternary Science	8	12	20
Education	40	158	198
Others	5	61	66

Table II
Facultywise distribution of students.

Faculty 1	Total enrolment 2	Post graduate 3	Research 4	Total of 3 & 4
Arts	641,186	47.316	3.440	50.756
Science	478,702	18.392	2.850	21.242
Commerce	147,789	7.906	0.236	8.142
Medicine & Vet. Science	67,453	3.447	0.101	3.548
Agriculture	44.228	2.900	0.129	3.029
Education	29,528	1.717	0.116	1.833
Law	32,000	0.983	0.53	1.036
	1,528,227	84.201	7.104	91.305

Table III
University trained persons required

Category	Number
Teachers - Middle & Secondary	1,650,000
University education and Research	400,000
Engineering	300,000
Medicine	150,000
Agriculture and Vet.Science	120,000
Others (Economics, Commerce, Law, Politics,etc.)	1,400,000

Table IV
Admission requirement

Faculty	Degree course
Engineering	80,000
Medicine	55,000
Agriculture, Vet. Science, etc.	25,000
Teaching and Research :	
a) Science	100,000
b) Others	75,000
Arts, Economics, Commerce, etc.	75,000

The estimate of the number of students seeking higher education during the next decade will depend on the rate of population growth and of economic development.

The population in India is nearly 800 million. Government and universities will have to formulate a well defined admission policy and take firm action to ensure that higher education can be opened to majority of students willing to have it. A tremendous effort involving careful and detail planning, a massive programme of teacher-training and a large enough allocation of funds will be required in order to implement the programme of opening higher education to arts, science, commerce and technology.

The number of post graduate students which is 91,000 is expected to go up to somewhere between 250,000 and 400,000 by next five years.

If this growth in numbers is to be compatible with the steadily rising standards of academic performance, considerable expansion and strengthening of university departments as also of post graduate departments in the colleges and universities will be necessary.

The effort to make secondary high school education effectively terminal has not succeeded for the simple reason that to many such a course appears as a major block in the improvement of their prospects in future. Unless a basic change takes place in the outlook of employers and Government so as to induce them to judge young men and women by the quality of the work they do and not by the paper qualifications they possess, it is hardly possible to wean away young people from the desire to enter colleges and universities for higher educations. The university degree has a very great attraction to our young men and women. Even when it does not serve as a passport to a job, it is still very much sought after for the status it brings.

In a social setting like ours in India, he who takes vocational course at the secondary level feels completely blocked for all his life as against one proceeding to the college or the university for higher education. Unless, therefore a very broad and highly differentiated post secondary programme of education is planned and developed, the attraction of the university is not likely to disappear.

For a large number of jobs in Government and private offices the aspirants must possess a first degree and for some of them even a Master's degree.

Even when there is no such formal requirement, a degree holder is always preferred and is paid much more than a man without a degree. Hence unless the tie between the job and the degree is broken and alternative arrangements are made for training young men specially for office jobs and unless it is decided that higher education will not be available except for specified functional purposes, it is not easy to solve the unemployment problem.

Since quality is the most important consideration at this stage, and everyone will agree that in the interests of efficiency and improvement of standards, appropriate norms must be laid down for admission to institutions of higher education and that they must be enforced more strictly than at present. Academicians may also approve of the selection principle on academic grounds if valid and reliable techniques of selection are available.

There are about twenty unitary universities in India at present but they are unevenly distributed over different states. Some states have no unitary university while some others have more than two each. It will therefore be necessary to establish during the next ten years about twenty new unitary universities. Under the supervision of University Grants Commission of India. This may fulfil the requirement as during next ten years the number of students for whom seats to be found for their higher education, will rise to 6 million.

Numbers of the degree and diploma level institutions needed for India are : Engg. and Technology, 425 and 450; Medicine, 226 and 330; Agriculture etc. 200 and 250 and Arts-Science-Commerce-Law etc. 2275 and 1050 respectively.

Actually higher education is not merely a tool of development, it is also a judge of the soundness or of the developmental efforts conceived and sought to be implemented. What is needed is action and imagination, a sensitiveness to the in-built levers of change, a formulation of the criteria of commitment to academic excellence.



Supporting Paper III

TRENDS AND ISSUES OF EMPLOYMENT IN HIGHER EDUCATION IN THAILAND*

"In the long run, we are all dead"

J.M. Keynes

London, 1936.

1. Highlights

The total output of Thailand is determined in part by strictly technical factors and in part by economic factors. These two factors are highly interdependent and are part of the aggregate production function of our nation. The aggregate production function shows the maximum possible output (GNP) of Thailand, given its labor force, capital stock, and other resources endowment. It is, therefore, the aggregate production function is shown by (1)

$$\text{GNP} = f(L, \bar{K}) \quad (1)$$

Where GNP = Gross National Product, expressed in Bath

L = Labor force

K = Capital stock

It should be noted that, all other things being held constant, two most important are :

1. Capital stock (K). Obviously, high technology implies high output, in particular capital stock is a parameter not subject to change.
2. Labor (L). It should be understood that L is represented labor force, which includes the training and professional skill at various levels i.e., high school, vocational, technical, teacher training and higher education

If we add the assumption that the capital stock of the country is being held constant, in other words, capital stock does not change in the short run, the GNP can be changed only by increasing the labor force, if such labor force is fully employed. In that case, the aggregate production function given by equation (1) would be presented as follows:

$$\text{GNP} = f(K, \bar{K}) \quad (2)$$

Equation (2) tells us what Thailand's real output will be and has all economic properties i.e. three stages of production (Increasing, constant, Diminishing returns). As stated earlier, capital stock is being held constant, Labor varies from case to case. Needless to say, we will discuss partial equilibrium on labor market alone. We have to introduce economists' toys, the supply and demand apparatus. Since the optimum level of labor force (the labor market equilibrium) is jointly determined by those seeking a job (Supply of Labor) and those offering a job (Demand for Labor). See equation (3) (4) and (5)

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Supply of Labor

$$L^s = f\left(\frac{w}{p}\right) \quad (3)$$

Demand for Labor

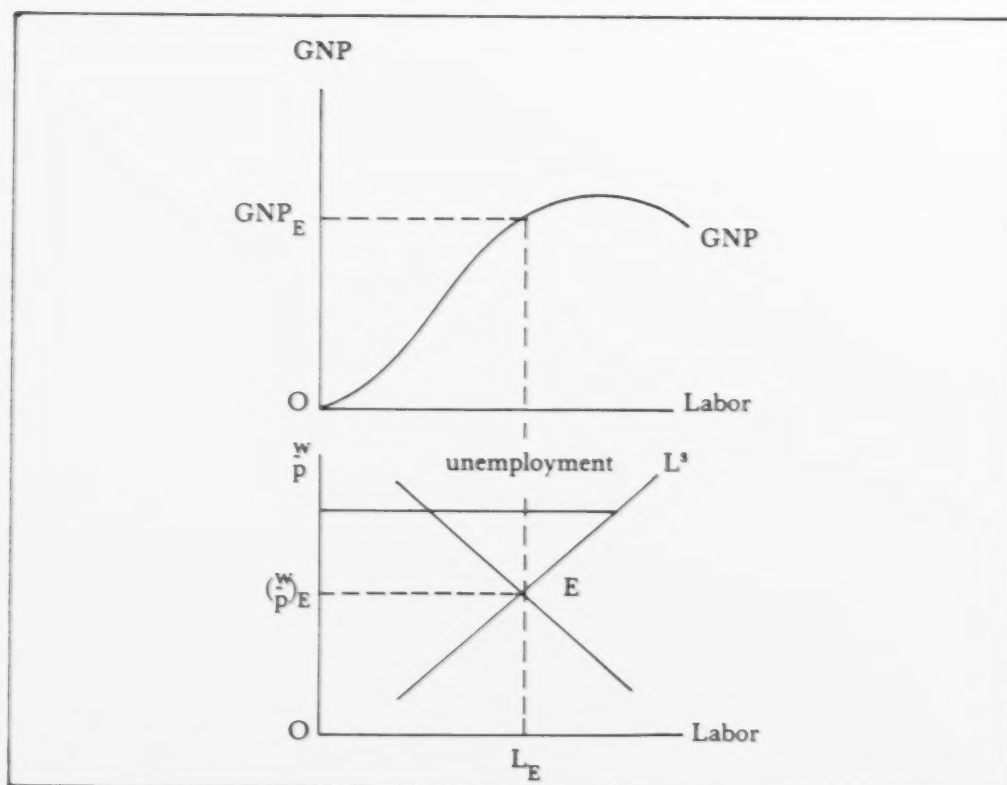
We further assume that hiring by all firms is competitive, so that the equilibrium condition will take place where the marginal product of labor is equal real wage.

$$MPL = f'(L, \bar{K}) = \frac{w}{p} \quad (4)$$

Labor Market Equilibrium

$$f\left(\frac{w}{p}\right) = f'(L, \bar{K}) = L_E \quad (5)$$

The three equations of the labor market show in figures (1) and (2)



This diagram will show the entire picture in the Labor market in the country. My paper will, however, focus on the Labor market, specifically at the higher education level, which includes all graduates from 14 state universities, 14 private institution, under the supervision of the Ministry of University Affairs, 36 teacher training colleges, and 28 vocational and Technology C Colleges, under the Ministry of Education. The discussion also exclude the police and military academy. For any one who is not familiar with Thailand educational systems, may see chart 1.

2. Objectives

On the basis of the discussions in the highlights this study has designed to investigate the trends and issues of employment, specifically, the graduate from both state and private higher education institutes. Unemployment, if occurs, is the most serious economic problem. Professor Tobin pointed out that the connection between unemployment and inflation is the principal a domestic burden of Presidents and Prime Ministers, and the major area of controversy and ignorance in macroeconomics.¹

3. Economic Development, Student Profile, Labor Force and Employment Profile

Over the past 23 years, the government of Thailand put must effort to shape the economy by launching economic plans. There have been five Economic and Social Development Plans in Thailand, started from 1961 onward. The gist of each plan is fairly discussed in Soparatana's book. For our reference here, the summary of each plan is presented.

¹ Jame Tobin "Inflation and Unemployment," *American Economic Review* (March 1972), pp. 1-18.

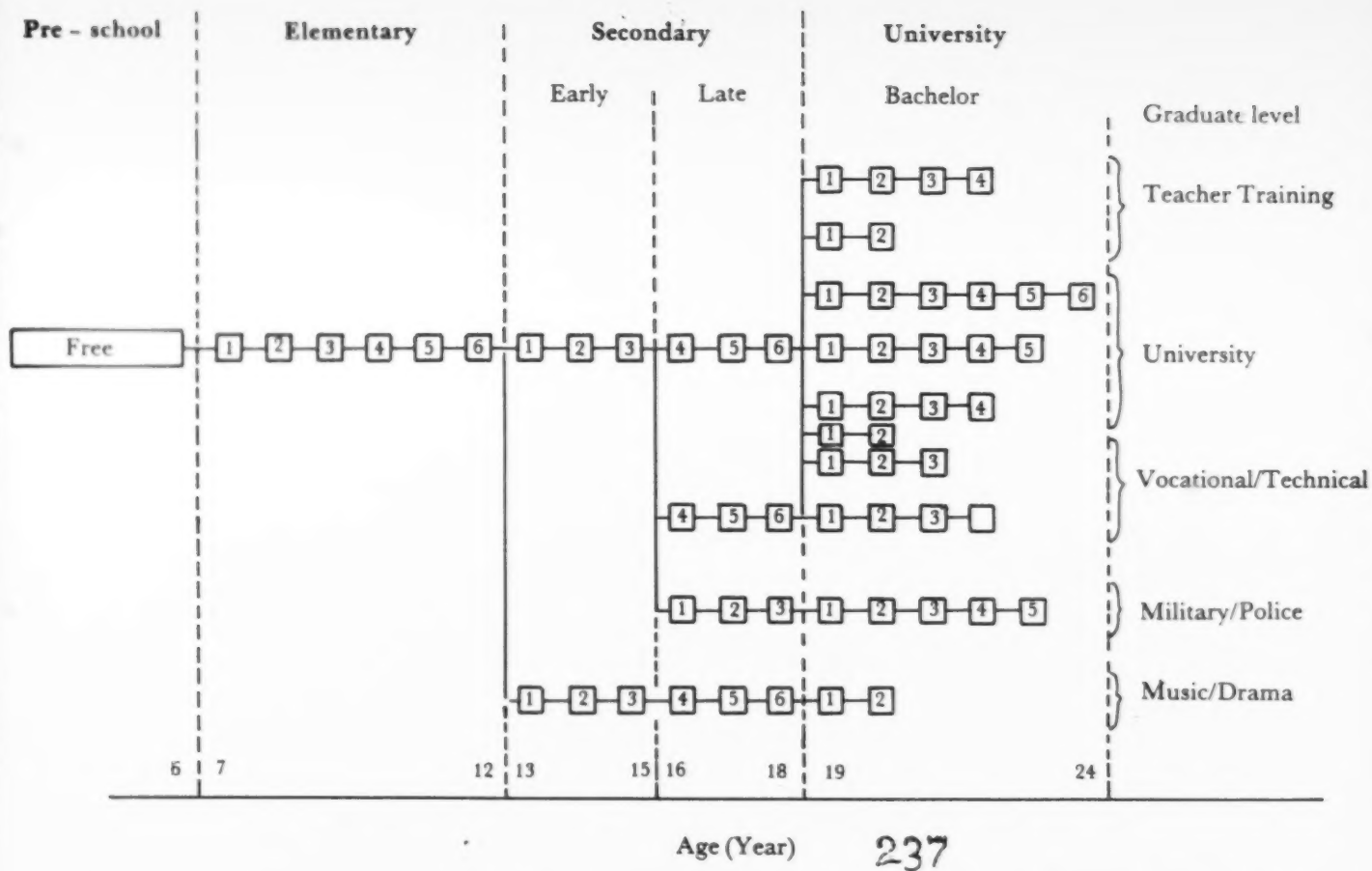


Chart 1 Educational Systems in Thailand, since 1972.

Table 1 Economic Changes in Thailand, 1961 - 1981

	First Plan (1961 - 1966)		Second Plan (1967 - 1971)		Third Plan (1972 - 1976)		Fourth Plan (1977 - 1981)	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Gross Domestic Product (GOP)	5.5	8.1	8.5	7.5	7.0	6.2	7.0	7.4
Agriculture	3.3	6.2	4.3	4.5	5.1	5.6	5.0	3.0
Mining and Quarrying	5.3	15.1	6.6	7.4	6.0	1.0	3.2	10.8
Manufacturing	9.3	11.1	10.9	10.2	8.0	11.1	9.6	9.0
Construction	3.9	12.8	11.4	5.0	6.5	5.8	3.0	11.8
Electricity and Water Supply	16.4	23.0	18.0	22.0	15.0	14.2	11.3	11.0
Transportation, Communication	9.3	6.1	11.0	7.3	6.0	7.3	7.4	8.7
Trade	5.4	8.1	8.4	9.2	7.0	6.8	6.3	6.2
Banking	5.4	15.8	17.0	15.4	15.0	8.7	8.1	14.4
Ownership of Dwellings	5.4	3.1	5.0	4.6	2.5	3.4	4.4	5.0
Public Administration	5.4	5.5	12.0	9.9	6.0	5.2	6.5	9.0
Services	5.4	8.0	9.5	8.4	7.0	8.1	7.8	9.7

Source: NESDB

The First Six - Year Plan 1961 - 1966.

The first phase (1961 - 1963) has the following main targets;

- (1). An annual increase in the national income of five percent and an increase in per capita income of at least three percent annually;
- (2). A capital formation of not less than 15 percent of the national income each year;
- (3). An increase in overall agricultural production as three percent annually, with special emphasis on diversified crops;
- (4). Varying increases in such manufactured goods and mining products as cement, textiles, sugar, paper, gunny bags, tobacco, tinore, lignite, and gypsum;
- (5). Local power production of 370,000 kilowatts, 1,000 kilometers of additional highways, 272 kilometers of railway lines;
- (6). An annual increase of four percent of the country, exports and imports, and
- (7). General improvement of the telecommunications, local services, education, and the balance of Trades,²

The second phase (1964 - 1966) has the following;

- (1). Falsing the standard of living of the people through maximum utilization of economic resources in order to increase the national output and the income of the people,
- (2). The Gross National Product (GNP) was expected increase at an average rate of six percent per during the period 1964 - 1966. The Gross Domestic Product was expected to reach 77 billion baht in 1966.
- (3). With the population growing at over three percent a year, per capita income would increase to over 2,400 baht in 1966.
- (4). Total gross private and public investment (Fixed Capital Formation) was expected to account for about 19 percent of the Gross Domestic Product (GUP) during 1964 - 1966, or 40.6 million baht.
- (5). A 4% increase in the aggregate output of agriculture over the period. Rice production in 1966 was expected to be 9.5 million tons.
- (6). Structural changes in the economy were expected to continue during the second phase of the Plan with agriculture's share in the value of total gross domestic production dropping from 36 percent in 1964 to an estimated 33 percent in 1966, while the share of industry, power, communication and transport continues to increase.
- (7). Encouragement of economic growth in the private sector and acceleration of private investment. Government financial resources will be directed mainly in the creation of the basic economic and social infrastructure - order to provide a₃₃ healthy environment for private sector to prosper.

The Second Five - Year National Economic and Social Development Plan (1967 - 1971)

The objectives and principal Policy guidelines were as follows:

- (1). To strive towards further accelerating the economic growth rate, with emphasis on more equitable distribution of income and social benefits..
- (2). To reduce the degree of income inequality and geographical imbalance, emphasis will be put on rural development as a measure to increase income of the rural population in remote areas.
- (3). To expand employment opportunities and improve the quality of human resources, the Plan will emphasize the elevation of workers skills to meet the economic and social demands of society.
- (4). To accelerate private industrial investment, private economic activities will be strongly promoted and stimulated by the provision of necessary economic infrastructures and healthy environment within which private enterprise can prosper. The Government's role will be to assist but not to interfere or compete with private business activities.
- (5). The primary emphasis will be put on the development of intensive agriculture, falsing productivity by greater use of capital and improved techniques, as a means to provide food and employment for a growing population, to provide basic materials for an expanding industry and to provide foreign exchange for the payment of imports.
- (6). To accentuate the role of science and technology, particularly in the adaptation and application of modern knowledge to the special needs of the country.
- (7). Economic and social development must by geared to the necessity to strengthen the national security.
- (8). Financial stability must be maintained as a means of assuring healthy economic growth without disturbing the balance of the economy and of inspiring international confidence.
- (9). Development projects will be implemented in accord with their priority and will be designed to yield the greatest benefit at the least possible cost.

The Third Five - Year National Economic and Social Development Plan (1972 - 1976)

Commencing the Fiscal Year 1972, the Third Five - Year Plan was launched. Marshal Thanom Kittikajorn took over the country, Thailand was then Under the administration of the National Executive Council (NEC). The gists of the third plan were as follows:

- (1). To promote national security. National security is closely liked with economic development, and neither can be neglected without jeopardizing the other. Without national security, economic development is aimless. By the same token, if economic development is not successful, national security cannot be maintained.

- (2). To overcome the economic slow-down to increase national income in keeping with the availability of national resources. It is clear that during the Third Plan period Thailand will face many economic problems. The main objective is to solve quickly the immediate economic problems. By so doing national income will be raised by fuller utilization of existing economic resources.
- (3). To solve the balance of payments problem. Financial stability is of prime importance in building up overall economic power. Solution of the balance of payments problem so as to maintain a minimum reserve level is a primary objective. This is a necessary condition for achievement of rapid growth during the Third Plan and in the future.
- (4). To maintain economic stability. An economic system aiming at a continuous high rate of growth must have price stability and balance between production and market demand. For this reason, the maintenance of economic stability is a prime condition for rapid economic growth.
- (5). To raise the income and living standard of the rural people in various regions. The growth of the economic system depends largely on the economic power of the majority of people who live in the rural areas. To spread evenly the fruits of development, the income of rural people must be raised. This is an important objective that must be attained as rapidly as possible.
- (6). To increase public services to satisfy the requirements of the population. One of the main functions of the Government is to provide public services. The Third National Plan has as an objective to accelerate the provision of public services, particularly social, for the whole population.
- (7). To reduce the growth rate of population. The economic condition of a family depends on two main factors : the ability to earn and the size of the family. During the Third Plan period the Government will provide services for family planning to those people who desire to utilize them.
- (8). To raise the level of employment. The yearly increase in population makes it necessary for the economy to grow rapidly in order to increase employment opportunities for the people of working age, both in the urban and rural areas. The Third Plan has as an objective to prevent the development of unemployment which may lead to economic and political unrest. The level of employment is to be maintained at the highest level possible.⁵

The Fourth Five - Year National Economic and Social Development Plan (1977 - 1981)

More than 15 years have gone, the government learned more from the first three Plans. The following main objectives were established:

- (1). To Accelerate Economic Recovery. Economic recession was a main problem during the later half of the Third Plan. Immediate measures will be undertaken to revitalise the economy in order to ensure a higher and sustainable rate of output, investment and employment expansion during 1977 and 1978. In so doing, a more solid foundation can be established for further development during the later half of the Fourth Plan period. In addition to striving for economic recovery, domestic price and international reserves have to be

maintained at a satisfactory level to provide necessary conditions for economic stability and a conducive investment climate during the Fourth Plan period.

- (2). To Reduce Income Disparities. Measures will be undertaken to improve income distribution and to raise the living standard of various target groups such as farmers, labourers, and others with low income. In addition, various measures will be implemented to spread the fruits of development as well as social services to people in rural areas to a greater extent.
- (3). To Reduce Population Growth Rate, Improve Manpower Quality and Increase the Level of Employment. Measures will be taken to lower the population growth rate to make it commensurate with natural resource availability and the envisaged economic growth rate. At the same time, manpower must be developed to meet the country's future manpower requirements so that a higher level of productivity can be achieved in the long run. Employment opportunities must be generated in both rural and urban areas to lower the level of unemployment. This means that additional jobs must be created to absorb those that will be entering the labour force in future.
- (4). To Improve the Management of Basic Resources and Rehabilitate Environmental Conditions. Particular emphasis will be placed on the allocation and rehabilitation of land, forest, water and mineral resources for optimum economic efficiency. Measures will also be taken to check and limit the deterioration of these resources.
- (5). To Strengthen National Security Management. Appropriate emphasis will be stressed on development of critical natural resources that are vital to the national security management and proper economic mobilization plan will be formulated accordingly. At the same time, special area development programme will be launched to support the national security objective.⁶

The Fifth Five - Year National Economic and Social Development Plan (1982 - 1986)

The Plan calls for the following prime objectives:

- (1). To recovery national economy and to stabilize national monetary situation,
- (2). To maintain structural adjustment and to increase productivity.
- (3). To develop social structural and distribute public services.
- (4). To develop social structural and distribute public services.
- (5). To coordinate national economic development and national security as an inter-dependent strategies.
- (6). To reconstruct the administration systems and to distribute and economic assets.

More attention has been put into rural development and structural adjustment (production, productivity, market, administration, technology, foreign trade).

With regards to employment policy which is the product of structural adjustment and economic efficiency, the followings are expected:

- (1). New employment of 3.5 million will be increased. This includes 1.8 million, person 842,000 persons, and 858,000 persons for employment in agriculture, industrial, and others, respectively.

- (2). by the year of 1986. Open unemployment will be 552,000 persons, or 2 percent of the labor force.

As mentioned earlier, more expenditures have been allocated for economic development, to stimulate well being of the people. Economic changes overtime can be seen in Table 1. It should be noted that the growth rate of each industrial sector and GDP for each plan were exceeded the targets.

Student Profile

Presently, Thailand educational system follows the 6-3-3 for elementary and secondary schools plus another 4 to 6 years in the university level and the medical school. The number of students of 1982 classified into various educational levels and ages are shown in Table 2. It should be noted that the number of students at the secondary school have sharply declined since the compulsory education terminates at P. 6 (about 12 years). Much of these students join the labor force, more or less in the agricultural sector, which adds more to the underemployment category.

If investigation on the number of students at the Higher Education institutes is made, the following trends are found. (see chart 2)

Trends of the students for over all educational levels up to the year 2005 are depicted in chart 3. The students in higher education from 1987 onward will be 4.7 millions and then to be stagnant at 4.8-4.9 millions annually. If this projection is true, more serious employment problems will be taken place and more blame will be placed on the Ministry of Education and Ministry of University Affairs.

Year	NUMBER OF STUDENTS			Graduates (Bachelor)
	University	Open University	Private Colleges	
1982	99,749	892,966	34,997	44,332
1983	105,955	924,639	37,878	55,314
1984	110,902	1,057,514	40,504	64,853
1985	115,968	1,152,039	24,291	73,290
1986	119,722	1,273,649	43,846	86,554

It is also noted that the graduates at the bachelor degree and at the graduate levels during this plan period are 324,343, and 31,438 respectively. The government also allocated the budget of 30,046,998 million baht or 92,636 baht for per capita investment at the bachelor degree level.

The following are the list of institutes under the the supervision of the Ministry of University Affairs (MUA).

I. State Universities/Institutions

1. Chiangmai University
2. Chulalongkorn University
3. Kasetsart University
4. Khon Kaen University
5. King Mongkut's Institute of Technology
6. National Institute of Development Administration
7. The Institute of Agricultural Technology

8. Mahidol University
9. Prince of Songkla University
10. Ramkhamhaeng University*
11. Silpakorn University
12. Srinakharinwirot University
13. Sukhothai Thammathirat Open University*
14. Thammasat University

II. Private Colleges

1. Assumption Business Administration College
2. Bangkok College
3. College of Business Administration
4. Christian College
5. College of Commerce
6. Hua Chiew college
7. Kanasawat College
8. Kirk College
9. Saengtham College
10. Siam Technical College
11. South-East Asia College
12. Sripatoom College
13. Vongchavalitkul College
14. Payap University

*open university (no entrance examination)

Table 2 The Number of Students in the Formal Educational System and School Age Population Classified to Class and Education Levels in 1982

Educational Levels/Ages	Number of Students	School Age Population	Percentages of Students Per School Age Population	Percentages of Total Students
K. 1 (4 Yrs.)	148,136	1,415,290	10.47	1.44
K. 2 (5 Yrs.)	114,916	1,392,014	8.26	1.12
Childhood (6 Yrs.)	145,635	1,370,720	10.62	1.42
Pre-School (4-6 Yrs.)	408,687	4,178,024	9.78	3.98
P. 1 (7 Yrs.)	1,366,765	1,350,944	101.17	13.32
P. 2 (8 Yrs.)	1,229,891	1,332,224	92.32	11.99
P. 3 (9 Yrs.)	1,211,048	1,314,098	92.16	11.80
P. 4 (10 Yrs.)	1,236,868	1,291,396	95.78	12.05
P. 5 (11 Yrs.)	1,315,152	1,275,893	103.08	12.82
P. 6 (12 Yrs.)	1,053,847	1,250,147	84.30	10.27
Elementary School (7-12 Yrs.)	7,413,571	7,814,702	94.87	72.25
M. 1 (13 Yrs.)	427,039	1,231,559	34.67	4.16
M. 2 (14 Yrs.)	399,618	1,205,054	33.16	3.89
M. 3 (15 Yrs.)	364,262	1,178,423	30.91	3.55
Early Secondary School and Equivalent (13-15 Yrs.)	1,190,919	3,615,036	32.94	11.61
M. 4 (16 Yrs.)	340,344	1,156,948	29.42	3.32
M. 5 (17 Yrs.)	165,833	1,123,833	14.76	1.62
Ms. 5 (18 Yrs.)	328,116	1,057,689	31.02	3.20
Ms. 6 (19 Yrs.)	112,985	1,056,737	10.69	1.10
Late Secondary School and Equivalent (16-19 Yrs.)	947,278	4,395,207	21.55	9.23

Table 2 (continued)

Educational Levels/Ages	Number of Students	School Age Population	Percentages of Students Per School Age Population	Percentages of Total Students
Freshmen 1 (19 Yrs.)	80,463	1,056,737	7.61	0.78
Sophomore 2 (20 Yrs.)	103,473	1,018,774	10.16	1.01
Junior 3 (21 Yrs.)	59,017	976,463	6.04	0.58
Senior 4 (22 Yrs.)	37,812	948,412	4.00	0.37
Fifth Year 5 (23 Yrs.)	6,650	905,266	0.73	0.06
Sixth Year 6 (24 Yrs.)	1,041	877,867	0.12	0.01
University Level and Equivalent* (19-24 Yrs.)	288,456	5,783,519	4.99	2.81
Certificate of Advanced Studies	571			
Master Degree	11,442			0.12
Doctoral Degree	165			
Total of University Level	300,634			2.93
Total	10,261,089	25,786,488	39.79	100.00

Source: Department of Educational Planning, Office of the Ministry of Education.

*Exclude Ramkhamhaeng and Sukhothai Thammathirat Open Universities.

Chart 2 Number of Students in Institution under the Ministry of University Affairs.

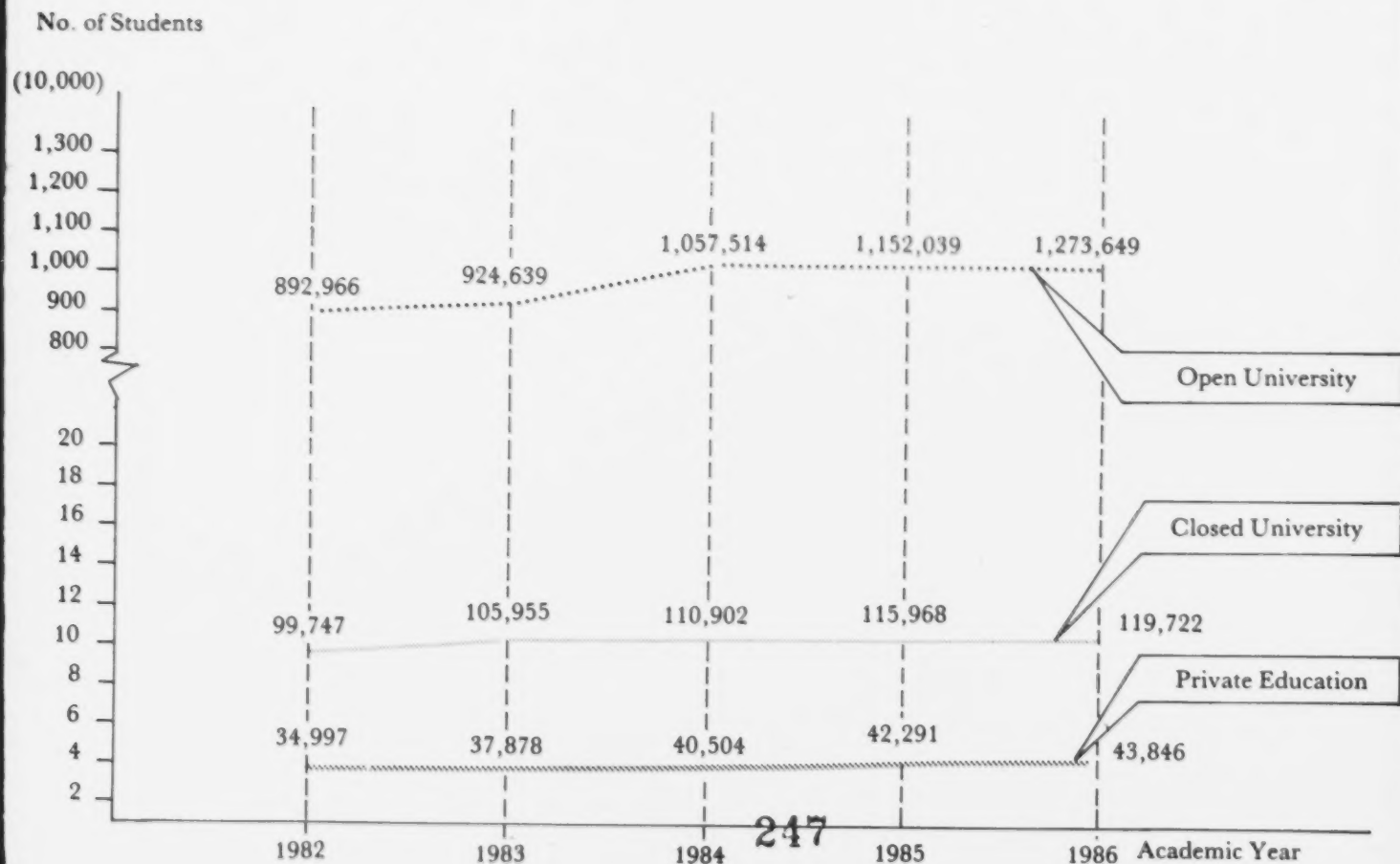
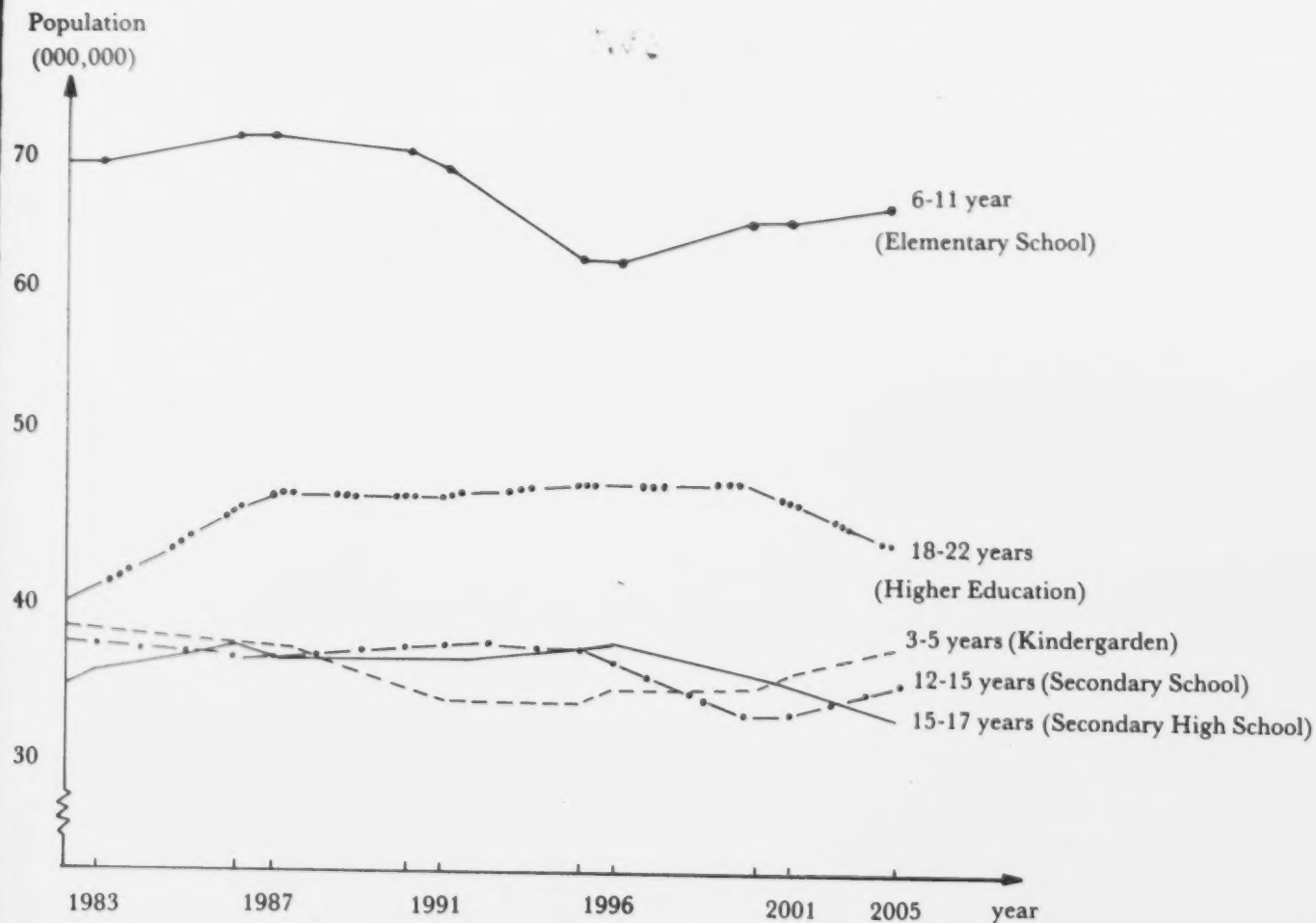


Chart 3 Number of Students at Various Levels.



Labor force and Employment Profile

In 1981, total labor force over the age of 11 totalled 23.8 millions and the Labor Force Participation Ratio (LFPR) accounted 71.59 percent. By the year 1986, the end of the fifth plan, the same indexes are reported to be 27.6 million and 72.59 percent, respectively. More details are shown in Table 3. In 1983, labor force over the age of 11 totalled 26.0 millions, among these, 25.5 millions were employed, with 18.1 millions, 2.0 millions, and 5.4 millions were employed in agricultural sector, handicraft industry, and other sectors, respectively. The distribution of such employment in each sector accounted for 71.0, 7.8, and 21.2 percent of the total employment.⁷ In the unemployment side, only 1.9 percent of labor force were reportedly unemployed, a slight increase over the 1.7 percent unemployment in 1982. These figures, however, were above the forecasting during 1981-1986 (Table 4). As far as economics is concerned, this unemployment rate is completely low and is claimed as full employment theoretically.

NESDP also reveals on employment problem that labor force will increase 3.1 percent or 780,000 persons annually within the fifth plan, and open unemployment will jump from approximately 1 percent in 1983 to 2 percent (or 600,000 persons) in 1986. Within this figure, one third of the unemployed falls into the vocational education up to the higher education levels. The another siamese twin is the underemployment or disguised unemployment which is currently accounted for 6-7 millions. Seasonal unemployment, again, has been occurred in Thailand for long since Thailand is agricultural oriented. Data on seasonal unemployment is reported to be 3.5-4 millions, largely at the northeast region and 37 provinces in the poor rural areas. Fortunately, the fifth plan emphasizes more on rural development, but underemployment and seasonal unemployment are still there. Though, high rate of underemployment and seasonal employment, which the Thai economy is now experiencing, are largely a consequence of fluctuations and instability of the national income and employment. The historical experience suggests that economic crisis is generally associated with decreased output and increased unemployment. NESDP and academic administration agree that open unemployment is the most important issues that face the nation. This issues call for new strategies in the Sixth. Five-Year National Economic and Social Development Plan (1987-1991), which is now under formulation of the plan. During the national NESDP-DPO-ILO-ARTEP Seminar on June 3-5, 1983, issues of Unemployment, Seasonal, Underemployment, Educated Unemployment, and Child Labor have been listed as high priority, which proper and prompt action of the government are precisely needed.

Table 3 Labor Force by Ages

('000)

Ages	1981			1986		
	Population	Labor Force	LFPR (%)	Population	Labor Force	LFPR (%)
11-14	4,810.65	1,190.38	24.74	4,827.95	1,124.62	23.29
15-19	5,479.27	3,822.37	69.76	5,987.83	4,101.16	68.49
20-24	4,561.47	3,783.34	82.94	5,406.77	4,491.25	83.07
25-29	3,869.10	3,365.92	86.99	4,499.21	3,933.32	87.42
30-34	3,288.39	2,948.58	89.67	3,814.31	3,453.58	90.54
35-39	2,566.60	2,329.57	90.76	3,228.73	2,965.07	91.83
40-49	3,646.38	3,318.20	91.00	4,404.88	4,024.46	91.36
50-59	2,664.31	2,022.08	75.90	2,999.02	2,269.82	75.69
60 +	2,373.65	1,029.06	43.35	2,849.76	1,232.93	43.26
Total	33,259.82	23,809.50	71.59	38,018.46	27,596.21	72.59

Source: NESDP.

LFPR = Labor Force Participation Rate
 = (Labor force/Population) × 100

Table 4 Unemployment 1981-1986

('000)

	1981	1982	1983	1984	1985	1986
Labor Force	23,810	24,569	25,339	26,102	26,850	27,596
Employment	23,524	24,225	24,959	25,658	26,367	27,044
Unemployment	286	344	380	444	483	552
% Unemployment	1.2	1.4	1.5	1.7	1.8	2.0

Source : NESDP.

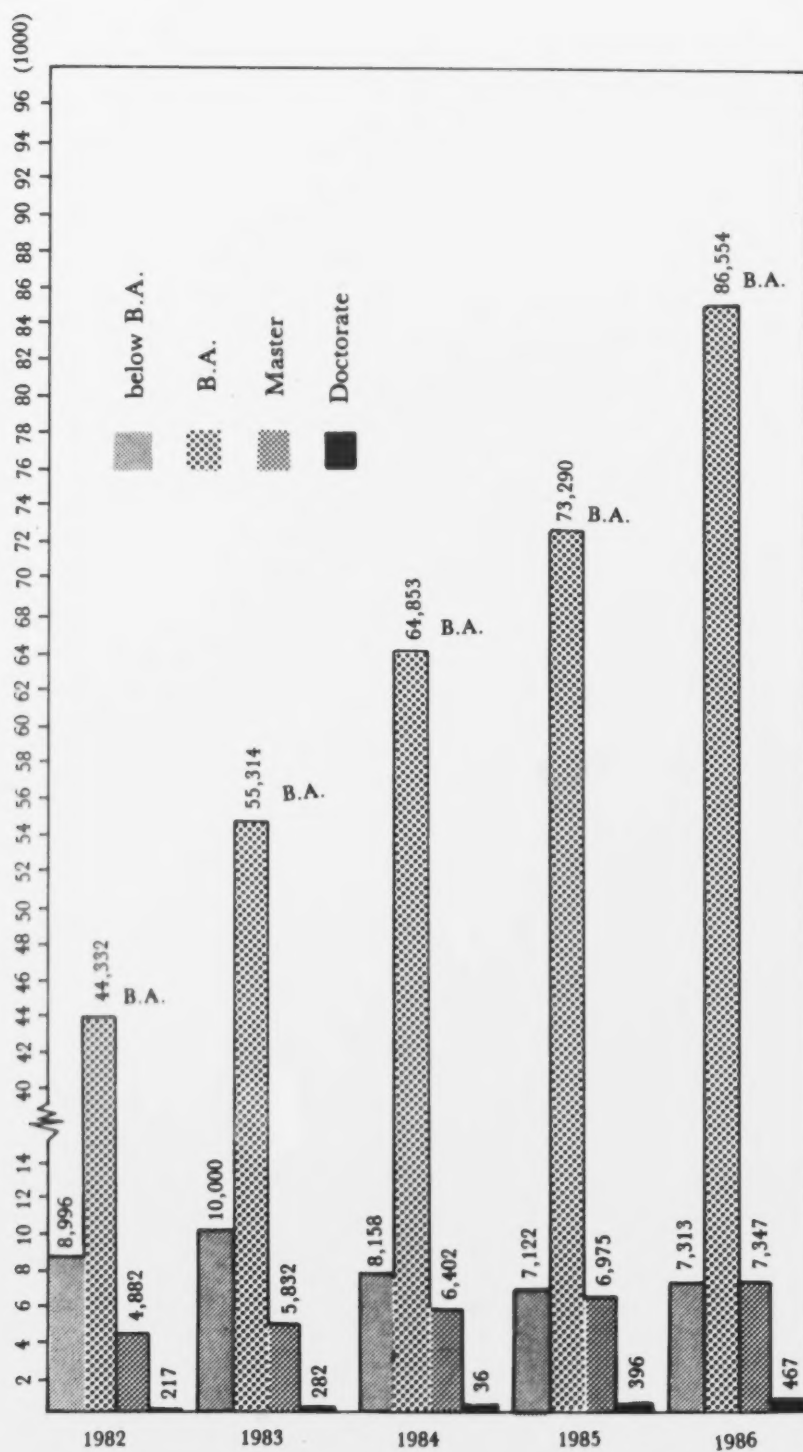


Chart 4 Target of the Graduates, 1982-1986.

4. Trends and Issues of Educated Unemployment

Early of 1984, all government agencies concerned, are well aware of the over supply of the graduates from higher education institutes. The Ministry of University Affairs called one seminar on placement services and all information regarding labor market. Ministry of Interior and Office of the Prime Minister, called on the Labor Market Day at Thammasat and Chulalongkorn University, to mitigate the unemployment problem, in January and August, respectively. On the first day, the following data were obtained:

1. Total applicants	26,595	persons
2. Education qualifications:		
(1) University	29.9	percent
(2) University Students	2.0	"
(3) Teacher Training	1.9	"
(4) Vocational	39.9	"
(5) Secondary High School	13.4	"
(6) Below Secondary High School	12.7	"
total	100	"

NESDP assessed this activity that the unemployment rates for each category; below high school, high school, vocational, teacher training, and university levels were 66.1%, 44.3%, 65.4%, 73.5% and 72.8%, respectively. These figures show that the new entrants were identified unemployment, which are rather high. (Chart 1) However, during the fifth five-year plan there has been a major trend away from government employment of higher education graduates. It is happening because there have been drastic cuts in government hiring.⁸ Where as the government once absorbed as many as 67% of the graduates in the past decade, they are allow only 2%, to be increased annually. This is one reason Why educated graduates are largely unemployed. In large part, educated unemployment is a natural phenomena since more people entering and leaving the labor force, and looking for and acquiring new jobs. During the Fifth Plan, changes in each economic sector will absorb more employment as shown in Table 5. Looking ahead to 1986, the future turns to a dark hope for the new graduate. The outcome of economic growth is not guaranteed employment. And Thai economy has the hard time to raise the growth rate. Interested readers may review Denison's Paper.⁹ Denison pointed out that the rate of economic growth depends on many factors. Economists offer a program for raising the growth rate, including estimates of how much might be accomplished through various measures. Denison also reveals that speeding up the long range growth rate by even one percent is likely a hard job.

The government study shows that all professional except medical doctor are supplied more than the requirement of the market. Details are shown in Table 6. It is no doubt that more educated unemployment in Thailand take place and will take place unless appropriate government policy is to be introduced and in effect. One possible policy as suggested by the cabinet and the subcommittee on employment as shown in chart 2. Strategies on chart 2 can be an effective tools to combat unemployment problems in Thailand. Nevertheless, for many decades, the government emphasizes on the supply-side alone. Now it is time for a change and the author agrees with Professor Schultz that investment human capital through education and training has apparently been a major factor in our economic development process, it may well be true that public investment in human capital, notably that entering into general education, is an effective and efficient set of expenditures for attaining this goal.¹⁰

Table 5

	1982	1983	1984	1985	1986	Average 1982-1986
Total	2.98	3.03	2.80	2.76	2.57	2.83
Agriculture	2.43	2.59	2.17	1.80	1.54	2.09
Industry	4.54	4.12	4.31	5.03	4.90	4.55
Mining & Quarrying	12.42	4.43	8.22	11.98	7.52	8.91
Manufacturing	8.01	6.62	7.13	8.32	8.06	7.63
Construction	1.97	2.85	1.08	1.69	0.84	1.69
Electricity	4.99	4.59	4.33	4.24	4.16	4.46
Trade & Banking	3.50	3.27	3.30	3.68	3.65	3.84
Communication and Transportations	3.76	3.76	3.70	3.86	3.95	3.79
Public Administration Defense						
Service	2.51	2.74	2.86	3.31	3.45	2.98

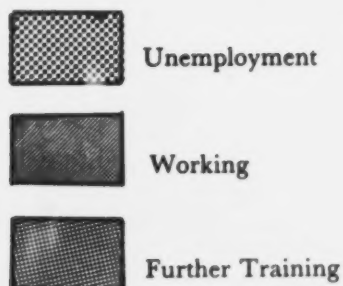
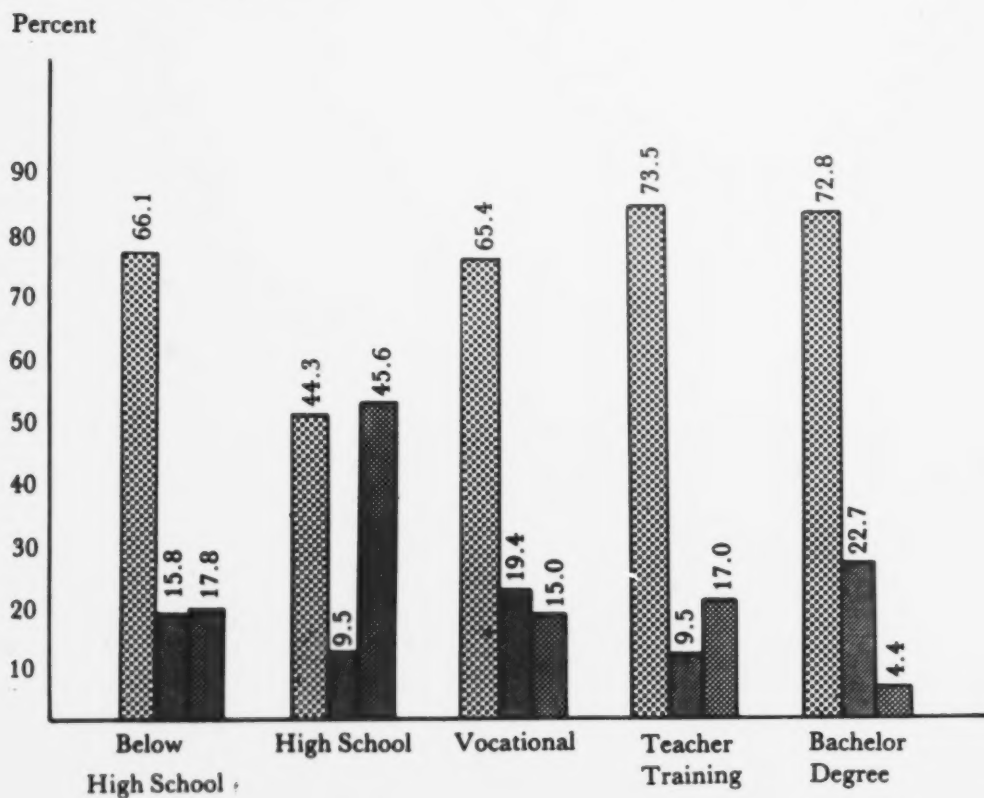
Source : NESDB.

Table 6 Table Difference of Demand and Supply of Labor

Fields	Forecasting Demand	Supply of labor	Difference Surplus Shortage
Doctor	3,600	3,166	- 434
Pharmacist	1,320	1,643	+ 323
Dentist	725	1,045	+ 320
Agriculture	6,260	9,382	+ 3,122
Teacher	45,135	76,824	+ 31,689
Teacher (Certificate)	74,307	78,598	+ 4,291
Engineer	9,454	10,635	+ 1,181
Scientist	6,207	8,523	+ 2,316
Vocational Education	334,870	584,310	249,440
Certificate Level	258,720	451,510	192,790
Agriculture	5,050	21,300	16,250
Industrial Technician	122,900	141,040	18,140
Commerce	100,700	253,700	153,000
Home Economics and Handicrafts	40,070	35,470	5,400
Diploma Level	76,150	132,800	56,659
Agriculture	9,830	12,160	2,330
Industrial Technician	37,820	58,280	20,460
Commerce	20,690	43,570	22,880
Home Economics and Handicrafts	7,810	18,790	10,980

Source : NESDB.

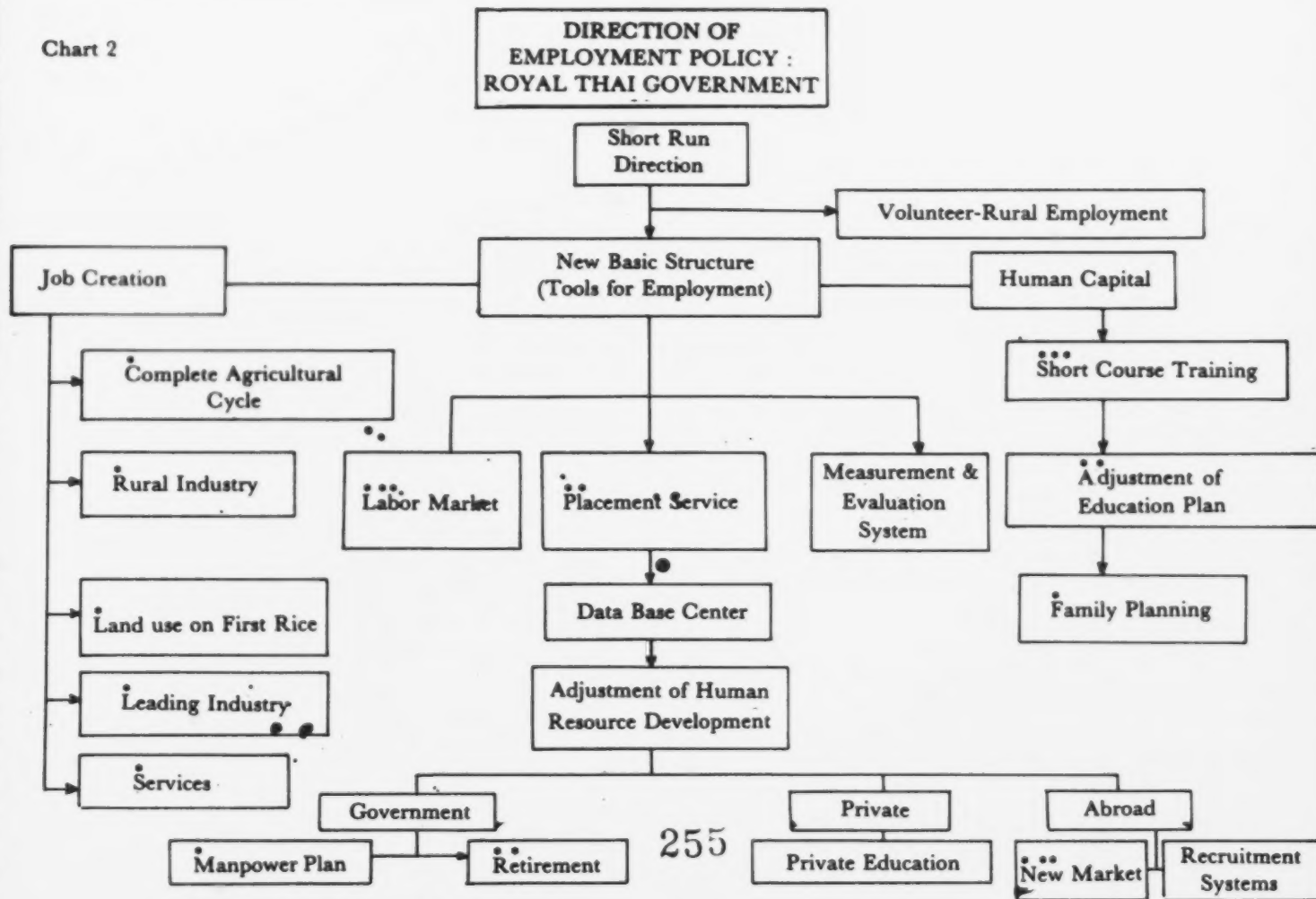
Chart 1 Percentage of Applicants in Labor Day Classified by Unemployment, Working and Further Education.



Source : NESDB



Chart 2



255

Source: Translate from Thai Language

* Proposed by Pattaya Seminar on "Direction and Employment Policy" June 3-5, 1982.

** Approved by Cabinet on July 5, 1982.

*** Approved by Cabinet on August 15, 1982.

References

- Chonhenchob, Athorn. "Labor and Employment Problems in Higher Education." Paper presented at the Placement Services Seminar, Pattaya, June 2-3, 1984.
- Chonhenchob, Athorn. "Major Trends of Higher Education in Thailand." Paper Presented at MUA-AASCU-NAFEO Seminar, Bangkok, July 7-13, 1984.
- Economic Report of the President 1983. Washington D.C. : U.S. Government Printing Office, 1983.
- Guskin, Alan E. "Major Trends and Issues in U.S. Higher Education." Paper presented at MUA-AASCU-NAFEO Seminar, Bangkok, July 7-13, 1984.
- Karnpisit, Thammarak. The Role of Higher Education and the Sixth National Economics and Social Development Plan. Paper presented at Higher Education and Laker Market Seminar. Chulalongkorn University, Bangkok, July 20-25, 1984.
- National Economic and Social Development Board. **A Forecasting of Labor Force, Employment, Unemployment and Demand for Labor.** Bangkok : Government House Printing, 1982.
- National Economic and Social Development Board. **Trends and Current Issues of Employment Problems.** National Seminar on Direction and Employment Policy. Pattaya, June on Direction and Employment Policy. Pattaya, June 3-5, 1983.
- Nitungkorn, Sukanya, Vachareeya Thosanguan and Nipon Poapongsakorn. **Interaction Analysis of Education and Employment.** Bangkok : TURA, UNESCO/Thailand, 1980.
- Noisaengri, Pat and Usa Korntaptim. "Ramkhamhaeng University Experiences in Extension Programmes." in **What They Say About Ramkhamhaeng University.** Bangkok : Srimuang Press, 1982.
- Noochoochai, Ponlasit. **Ramkhamhaeng University the First Ten Years.** Bangkok : Victory Power Point Ltd., 1982.
- Office of the National Education Commission. **Education Sector Survey.** Bangkok : Navakanok Press, 1983.
- Office of the National Education Commission. **Educational Indicators.** Bangkok : Funny Publishing, 1983.
- Panitchpakdi, Supachai. "Linkage of Higher Education and Labor Market : Technigue and Attitude." Paper presented at Higher Education and Labor Market Seminar. Chulalongkorn University, Bangkok, July 20-25, 1984.
- Panpiamrat, Kosit. "Migration and Employment in Rural Area." **Thammasat Economic Jurnal.** Vol. 1 No. 2 (June 1983), 1-11.
- Puntasen, Apichai. "Higher Education and Labor Market in the Future." Paper presented at Higher Education and Labor Market Seminar, Chulalongkorn University, Bangkok, July 20-25, 1984.
- Soparatana, Thamnoon. **An Economic Forecasting of the Gross Provincial Product (GPP) of Thailand.** Bangkok : S.M.M. Press, 1981.
- Soparatana, Thamnoon. **Economic Development Plans.** Bangkok : ABAC Press, 1982.

Sriprasat, Prayool. "Current Issues of Higher Education and Labor Market." Paper Presented at Higher Education and Labor Market Seminar. Chulalongkorn University, Bangkok, July 20-25, 1984.

Tobin, James. "Inflation and Unemployment." *American Economic Review* (March, 1972), pp. 1-18.

Supporting Paper IV

THE EMPLOYMENT OF OPEN HIGHER EDUCATION - GRADUATES*

People give meaning to education as growth or development which means that, when one has been, educated one will be developed. The more one is educated, the more one grows.

To educators when a man or a woman grows, it means that the individual grows in all respects...physically, mentally, emotionally. The man or woman who is educated will be able to make appropriate decisions, to work individually and as a member of a group, and to participate in a democratic way of life. Such individuals will know themselves and their society and be able to identify ways of earning a living and of being happy.

If this definition or interpretation is true, it would mean that people with more education would have more opportunity for employment. The open university seems to be designed to provide opportunity for more people to receive more education. In Thailand Ramkhamhaeng University and Sukhothai Thammathiraja University are equipped to hold all the people who desire to join. These two universities, then, should help more people to be employed. Recent statistics, however, indicate that it may not be true that more education means more opportunity for employment.

Unemployment By Level of Education in Thailand, 1980

Level of Education	Percentage Unemployed
None	0.42
Primary	0.88
Secondary	3.86
Vocational (secondary)	7.66
University	3.99
Higher Vocational	5.12
Teacher Training	3.49

In a seminar session, at one upcountry Thai university I was asked by a professor what I, as director-general, would do given that only 2% of the students in his department's rural home economics programs were able to find employment. I told the audience that the question should be not what I should do. It is the professor and his university that should realize that the problem is theirs. The government provides them with a large budget to educate students in the field of rural home economics development in order that these graduates will be able to help the villagers. But, it seems to me that after receiving their education these students can not even help themselves find employment. They become a burden to the government, blaming it and demanding that jobs be created for them.

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In another northern city of Thailand I had the chance to present certificates to about 200 students who had completed short-term vocational training programs and to talk with them as a group. There were only 5 persons who knew what they were going to do with the skills they had gain through the training. Before they joined the training, this group of young adults farmed or were day laborers. After receiving training in a vocational area farming or labor might no longer interest them. Does this mean that the vocational short term training program trains people for unemployment?

How do people study in the schools and colleges? They generally spend their time studying to master subject matter and skills in order to become specialists or technicians. Their aims in general are to be employed by the government or by large private firms in the area or in the fields of their study. But government positions are now scarce and there are not many large private firms except in some particular fields. Therefore, most of the graduates have to become self-employed. The question is have they been trained for self-employment at all?

The objectives of education according to what I understand are something like the following;

- to develop a man or woman to know him or herself,
- to enable individuals to make decisions on the basis of their abilities, knowledge, and their social context,
- to be responsible individuals...to be tough, cooperative, and able to participate in a democratic society, and
- to be able to identify ways to earn a living and be able to live accordingly.

If what I have just mentioned as the aims of education are true, then the subject matter studied in school and universities should be means to these ends. However, those who are engaged in education -- professors, teachers, and students and even the general public --are confused about the aims of education. Many or most even believe that subject matter, which is simply one of the means, is it self the goal of education. Therefore, if one is not employed in the field in which they have been trained, they will be unemployed.

Another weakness of training programs in school, universities, and even out of school activities is that the students and teachers rarely stop to evaluate themselves and their society in order to determine the meaning or value of the new skills or education achieved. Speaking metaphorically, at time it seems to me that education can be viewed thusly. An individual learns to sharpen a knife and begins to sharpen it. After a period of time, the blade is tested for its sharpness and the individual is graded. The process continues. The individual learns how to make it even sharper and the result is graded. More efforts are made to make it even sharper and the results are further graded or evaluated. After sixteen years the individual has achieved the sharpest blade possible. He or she is recognized for this achievement, standing up to receive the appropriate certification. Now the individual takes this very sharp knife, looks around, and doesn't know what to do with it. Frustrated, he or she strikes out at others or, even, him or herself. If students and teachers continuously review the learning and constantly plan and replan together, they will not encounter this frustration...they will not be left in the wilderness. Rather, they will know which way they will use the knife to earn a living. They will never be unemployed.

Open higher education can be either the most helpful or the most harmful educational force in the country. If the open university's major aim is to credential people, to give degrees to people, who can pass written examinations focusing on subject matter, it will simply contribute to unemployment. Only if the open university is aware of this possible

consequence of its existence and try to avoid it by making its training programmes a real educational experience can it then be a positive force in the country.

My specific recommendations are as follows:

1. A sound, realistic guidance programme is essential if students are to be able to make choices on the basis of both preference and utility.
2. There should be some requirements for students to attend group meetings, not necessarily at the university's campus, but literary anywhere. The purpose of these meetings would not be to promote understanding of the subject matter, but rather to discuss ways in which the subject matter can be put into use in their lives and their society, taking into account the strengths and limitations of both the individual and the societal context.
3. If there are any particular programmes which focus on skills or subject matter, special effort should be made to explore carefully job market possibilities.
4. Have the students regularly evaluate themselves individually and as a group in order to determine how they or the group can secure rewarding employment.



PLENARY SESSION V :
The Management
Challenge

Main Paper

OPEN HIGHER EDUCATION: THE MANAGEMENT CHALLENGE*

The management challenge of open higher education is an imposing topic. The management of an educational program is a highly pragmatic venture involving practical judgments and actions that balance the desirable with the possible. As a University President recently told me, "Administration of higher education is base at the art of the possible." Resources are always limited in terms of needs; establishment of realistic priorities often challenge entrenched interests; large, diverse populations to be served and the geographical dispersion of clients in those populations confront management with a variety of practical problems; the rapid growth of knowledge, but more importantly the changing nature of knowledge and new uses of knowledge produce rapid obsolescence in programs and necessitates entirely new ones; the new technologies and delivery systems pose choices which contain both short and long term hazards because of the commitment, costs and organizational changes they required. This beginning list alone represents management challenges which might each serve as a topic of analysis.

Contemplation of this list does give some insight into an initial set of observations about the nature of the management of open higher education. First, management activities are both diverse and complex. Identification of needs and establishing priorities, for example, require technical skills (needs assessment, evaluation of program capacity and capability, market potential, mission and purpose identification); deliberation and negotiation skills, both internal and external to organization; skills in, and knowledge of, decision-making processes; and implications for policy, to name but a few. Second, as already noted, the activities of management are rooted in the realities of on-going institutions and programs. As Christopher Hodgkinson (1978,23) notes, "The form of administration is action-focused and the stereotypical attitude of administration is pragmatic." Third, the arena in which management functions are conducted is highly situation specific. The terms used to address the programs under consideration here is but one symptom of the apparent need to indicate uniqueness: open access, continuing education, recurrent education, university without walls, external degree, adult education, distance learning, lifelong learning being only a few. The reference to the pragmatic nature of administration is another symptom of situational specificity since local conditions are major constraints to programs. Fourth, the management of education cannot be viewed as static sets of concepts, procedures and practices; client and societal needs, the knowledge base, the technologies, and management itself are all in change. Implications of each of these assumptions is taken up as the challenges selected for presentation are addressed. Before that is attempted, however, I shall turn to two other considerations.

Management Specified

For the purposes of this paper, a delimitation of the topic is in order as well as a specification of the terms management and administration. Management here refers to the functions, procedures and means oriented activities of an agency or organization while administration refers to the execution of management functions by managers. Administration might be thought of as the art, strategies and values as opposed to

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quantitative-factual, structured and scientific ends-oriented activities. This definition conforms to the nomenclature of the Royal Institute of Public Administration and the usage of American authorities. The distinction between these terms is not precise and is often blurred or not followed in the literature.

Administrative activity is generally conceived to consist of three broad categories of management functions: policy making, institutional direction and technical-tasks attended by three levels of managers as depicted here:

Functions	Representative Activities	Administrators
Policy Making	Long range planning; external relations in policy making; strategy determination; public deliberation; resource acquisition.	Top level managers
Institutional Direction	Operational policy; short range planning; program determination organizational leadership; internal resource allocation.	Middle level managers
Technical Tasks	Program implementation; staffing and staff development; budget; student services.	Lower level managers

From: McCleary, L.E. in Orlosky et al., 1984 **Educational Administration Today**. Columbus, Ohio: Merrill, Ch. 2. Also the administrative levels are those used in UNESCO training, see **Exchanging Experiences in Educational Planning and Management**, 1981. UNESCO Regional Office for Education in Asia and the Pacific, Bangkok, Thailand.

Although the categories of functions are reasonably discrete, the staffing of those functions cannot be. Top level managers must concern themselves with internal direction of institutions and, in fact, are often the same individuals; lower level managers (heads of individual programs and technical-managerial specialists) need to participate in institutional direction activities and in policy making.

Open Higher Education Specified

In order to provide an operational definition that permits a reasonable delineation of the topic for purposes of analysis and discussion, open higher education might be defined in terms at least four conditions. For this purpose, open higher education refers to:

1. Education provided beyond completion of compulsory schooling, usually beginning during the age range of 15-18 years.
2. Participation in education can be continuous or recurrent throughout a life span with freedom to engage in or withdraw at the learner's choice.
3. Programs should be sufficiently broad to include vocational (professional to semi-skilled), general, personal and social aims.
4. Programs should be planned and provided by an educational entity such that authority and responsibility can be assigned and continuity guaranteed over time.

Adapted from: *The Education of Adults: A World Perspective*, 1975. UNESCO, 2nd Edition, pp. 21-24.

The Challenge of Identity and Domain Definition for Management/Administration

A beginning was made in the opening of this paper to distinguish between management and administration; also, it has been noted that a distinction exists within organization from highest to lowest levels. Hodgkinson, already cited, offers one conceptual set of dimensions which he perceives as continua. They are provided here (Hodgkinson, p. 4).

CONCEPTUAL CONTINUA FOR MANAGEMENT—ADMINISTRATION

	Science	_____	Art	
	Executive	_____	Policy	
	Facts	_____	Values	
MANAGEMENT	Lower	_____	Upper	ADMINISTRATION
	Echelons	_____	Echelons	
	Tactic	_____	Strategy	
	Quantitative	_____	Qualitative	
	Material	_____	Human	
	Active	_____	Reflective	
	Specialism	_____	Generalism	

This set of dimensions does not exhaust the list. Also, the terms are often reversed in usage. In this usage, however, the pure administrator would be a philosopher and the pure manager would be a technologist.

The definition of the domain of the field has employed three schema: function, process and fundamental theories. The following list is representative of the concepts employed in domain definition.

PROCESS	FUNCTIONS	THEORIES
Planning	Program-operations	Organization theory
Organizing	Supervision	Decision theory
Motivating	Staff personnel	Leadership theory
Communicating	Student personnel	Communication theory
Controlling	Leadership	Systems theory
Evaluating	Finance	Value theory
	External Relations	

Each of these schema have been used 1) to guide inquiry into problems in the field of management, 2) to provide a definition of this field of activity in order to address leadership, decision-making, role specification, etc. and 3) to structure preparation and training to achieve more effective performance in management roles. Mackenzie (1969, p. 81) constructed a diagram in which he placed management concepts in some logical order. The Diagram is given in Appendix A.

Fundamental to the challenge to identity and domain definition is the situation specific nature of management already noted. This recognition of situational specificity represents a major challenge in any attempt to build a knowledge base for practice. In the international scene situational specificity frequently has been demonstrated when programs and practices successful in developed countries have been transplanted, more or less in en

toto, to third world countries and have been ineffective. Other evidence of the recognition of the challenge of situational specificity can be seen in the types and uses of research now undertaken in this field. It appears to be largely made up of case studies, individual program evaluations and descriptive accounts of projects. One immediate project that might yield significant results for open higher education would be a meta analysis, or secondary evaluation, of this large body of information. One aspect of such an investigation would be to determine the situational elements common to programs and projects in relation to measures of their effectiveness.

The Nature of Inquiry as a Challenge

In addition to situational specificity the adjectival typing of management-administrative into subsets of educational, public and business has, to a significant extent, restricted the flow of useful information both for practice and for knowledge accumulation. Studies which involve higher education should seek to include lower education and the other arenas of management as components. There is a sharing of research across these arenas but not the inclusion of them. There is perhaps more commonality between high tech industry, research and development organizations, banking and communications enterprises in terms of certain variables than is likely between the wide variety of educational organizations. This is true of such variables as: organizational structure, authority allocation, change processes, and the like. Banking, for example, characterized as conservative and slow to change, has been one of the leaders in the adoption of technology. Large corporations have moved rapidly into long range planning and into their own manager inservice educational programs. Research and development organizations have been highly successful in allocating authority in nontraditional ways in order to accomplish creative development work.

Kinds of inquiry should be examined as well. The typology proposed here consists of six identifiable forms of inquiry and characteristics from which distinctions between them can be made.

It should be clear that all forms of inquiry are necessary for healthy development. An analysis of the current state of inquiry relative to open higher education management is beyond the scope of this paper; although a search of this literature was carried out. A first assumption from that literature search is that inquiry is heavily loaded toward program evaluation, action research and policy studies. These forms are essential to decision making and decision making is the essence of management. However, the question of long term vitality for higher education, and particularly for open higher education, would imply a careful assessment of the forms of inquiry. DeLandshere (1982) prepared a monograph for UNESCO, **Empirical Research in Education**. However, he makes no direct reference to empirical research in the management of education. This fact alone should give us some cause for concern. His treatment of issues of qualitative versus quantitative research has particular relevance for higher education, but the substance of higher education is not treated.

FORMS OF INQUIRY IN HIGHER EDUCATION

Characteristics	Classical Designs	Conceptual Studies	R/D	Evaluation	Action Research (Project)	Policy Studies
Primary Purpose	Knowledge Confirmation	Concept Clarification	Product Development	Quality Control	Specific Problem	Goal Setting
Control: Contamination Proof Internal Validity	High		Moderate			Low
Generalizable: Context Proof External Validity	High		Moderate			Situation Specific
Objectivity Bias Proof	High		Moderate			Low
Replicable Reliable	High		Moderate			Low
Values Interpretation	Value Free					Judgemental

The challenge associated with forms of inquiry does not exhaust this topic. Within the forms of inquiry there is much room for improvement. Program and institutional evaluation often is cited as being restricted to program or institutional activities ignoring basic assumptions upon which the activities are based, for example, whether other models or service units might be more effective or whether other needs might be more pressing (Fecsley, 1983; Griffith & McChusky, 1980; among others). Knox (1982, p. 74) notes that, Effective practices for setting objectives, or organizing activities or programme evaluation occur in one segment (the institution) but not in others.

This observation, which Knox reports as a finding, indicates the variation in practice relating to forms of inquiry.

Keegan and Rumble (1982) indicate a number of evaluation criteria used to determine the success of an open learning program. They list:

- 1) access - how many and what kinds of people are served,
- 2) relevance - program offering compared to community needs and expectations,
- 3) quality - student outcomes
- 4) cost effectiveness - impossible without a "competing program;" alternative.
- 5) institutional impact - influence upon goals, policies and practices of other the community.
- 6) production - number of students, time to produce a graduate and number of graduates in proportion to students admitted.

Although these authors do not extend their analysis, it should be apparent that these measures could be related to a variety of management requirements, for example, to need assessment and to program planning.

Challenge of Basic Values

Three underlying values constantly arise in the management of open higher education. They are quality, equality and efficiency. **Quality** considerations in higher education have their roots in elitism. Quality has meant absolute standards based upon scholarly expectations defined by the best minds of a given field and to restricted definitions of what constitutes higher education. Quality considerations have led to admissions requirements, rigorous external examinations, grading systems and other academic control mechanisms. **Equality** considerations have their roots in the democratization of higher education and efforts to open learning opportunities to the entire population. **Efficiency** is inherent in management as managers attempt to achieve goals with the least cost and effort. The challenge arises in that increases in emphasis on quality, traditionally conceived, reduces equality and the reverse. Efficiency on the other hand is meaningless without a clear definition both quality and equality. The institution committed to equality considerations will have different criteria for and measures of efficiency of its operation.

Those who are committed to equality have the more difficult task. In open higher education systems relative standards must be used to measure gains (e.g., the measure of performance of learners upon entry against either the gain each learner demonstrates or the gain achieved by a group of learners in terms of comparable groups using different learning systems). One can develop a management grid to identify efficiency criteria somewhat in the manner shown. Careful noting of **current practice** vs **desired practice** for each cell permits an examination of the relationships among the three values. Practices can be specified such that criteria of efficiency can be determined and measures taken. This form of evaluation strategy is useful in assessing programs and also in projecting needs. However, some rational, overt means are needed to expose and examine these three interrelated values.

	Quality	Equality	Efficiency
Organization	Current Desired Practice		
Resource Allocation			
Personnel Required			
Program Definition			
Delivery System			
Materials, Facilities			
Student Achievement			

The Challenge of the Future: External Forces

In a recent international conference concerning the future of higher education there was general agreement among university, business and political leaders about the immediate directions that management is taking with all types of organizations but especially higher education. This is their list:

1. Planning is becoming essential - called "outside-in" planning it is **not** highly quantitative; it is tuned to external conditions and internal strengths and conditions, more an analysis than a blue print.
2. External environment and the potentials of the area served is receiving detailed attention - demographics of population age and distribution, economic data about the region, plans of industry and government, educational needs of the total population, etc.
3. Future is becoming more important than the present - management is concerned with public support and the quality of programs that will influence long term stability.
4. Technology is becoming an essential tool of management - managers are computer literate: planning, control, evaluation and reallocation are becoming the primary management functions.
5. People are becoming more important - more attention is paid to faculty and staff, quality and adaptability of people is the important element in vitality.
6. Communication processes are becoming more open - there is a trend toward a more open style of sharing information with a variety of groups.
7. Governance is taking new forms - more action groups are brought together to solve problems, initiate programs, participate in planning and evaluation.
8. Managers are taking a more active role - there is more centralized decision making, more direct intervention to end or cut programs and add others, and to alter direction.
9. Finance is becoming more important - decisions are being more driven by financial concerns.

The list has no particular validity except for its suggestiveness for our own situations as provided by a group of knowledgeable and practical individuals.

There are some well established external conditions that present challenges which are pervasive. First, there exists a widespread and growing understanding of lifelong education needs. "Those who have been deprived of an education are nothings," as a Minister of Education of a Latin country recently told me. In developed countries three to five changes in careers for a majority of people is a reality. This condition translates into an enormous demand for open higher education which extends over the life span of each individual. The 1980, the U.S. census documents that 45,000,000 adults beyond twenty-one years of age are in some form of formal education. This pent up demand results in a serious shortage of resources for which there are no easy solutions.

Second, high technology is now a necessity both in the management of higher education and in the educational programs themselves. The mastery of use of this technology will occupy managers of higher education for the short run (perhaps a decade) until it is assimilated. Useful management tools are provided by the computer, see Appendix B, and for delivery systems such as micro-wave networks, see Appendix C.

Third, alterations in the "information age" will force changes upon higher education which hold particular relevance for open higher education. From a paper entitled, "Mass Producing Intelligence for a Rational World" (Debenham, 1980) five major areas of change are projected for life long learning:

- 1) Reorganization of general education around life decision systems rather than disciplines -teaching knowledge in subject areas based upon the basic discipline was desirable when tradition and intuition guided decision making; intellectual competency is now required for interdisciplinary decision analysis;
- 2) Emphasis will be upon changing relationships rather than upon static relationships -changing life conditions require differing modes of sharing, negotiating values, etc. within the family, the work place, and the community;
- 3) Focus upon aggregates of individual and social needs and away from historical and traditional institutional determination of what needs are to be served;
- 4) Reorientation of learning from memorization and categorized systems to information that is openly accessible which can be utilized to solve immediate problems and anticipate the future; and
- 5) Expansion of education into all sectors of the society and the deinstitutionalization of learning. (See Appendix D)

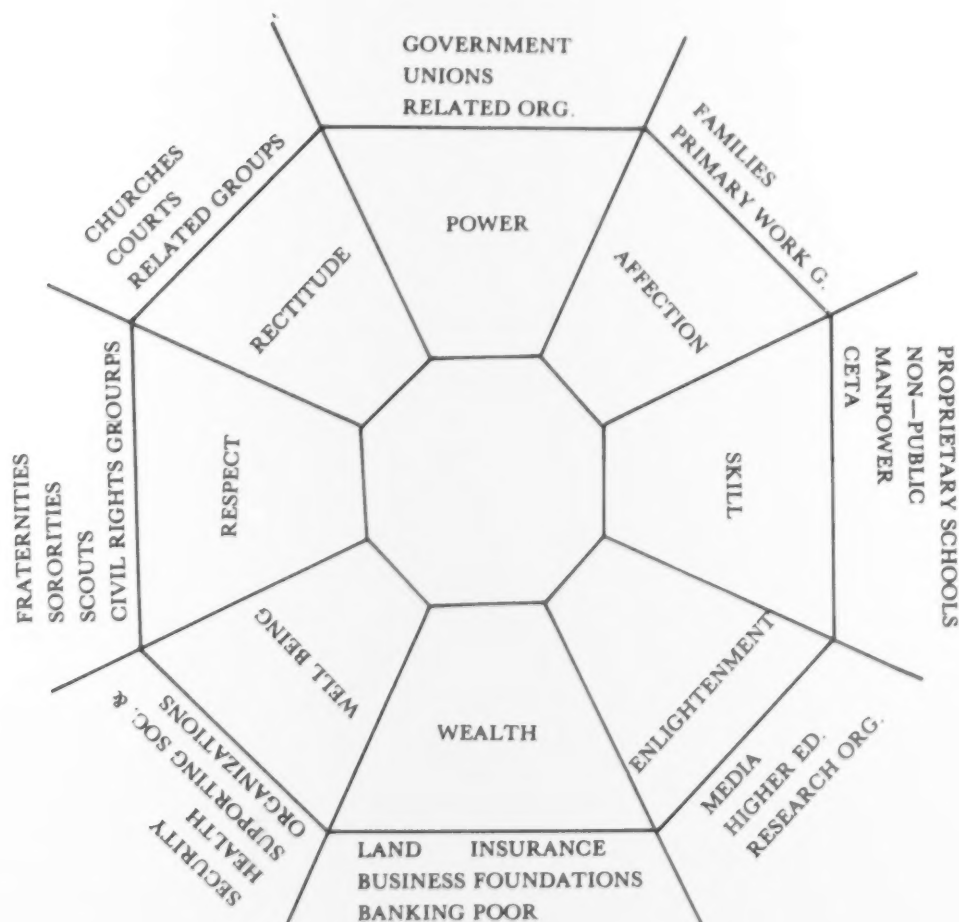
Open higher education has made significant beginnings in anticipation of the social forces that are bringing about the changes noted here. The challenge will be to find the means and the will to pursue them with vigor.

Fourth, open higher education will need to relate more closely to its communities whether local, district, national or international. How well this is done largely determines the effectiveness of programs from two directions: 1) identifying and meeting educational needs and 2) generating financial and moral support. At any level, a community can be analyzed in terms of sectors which form around basic values. In an adaptation from Lasswell and Kaplan (1950) eight basic values appear to be universal and upon which social institutions form. How each of the values is met depends upon the strength of the institutions supporting that value and how fully community members have access to the means, through their institutions, to actualize these values in their lives.

Open higher education is placed at the center in this conceptualization because one can assess the community served in order to arrive at judgments about the educational needs of a sector versus the support desired to accomplish goals. This conceptualization provides a blank "map" which can be filled by known planning devices such as surveys, advisory boards, etc.

The logical management concern flowing from external forces is **planning**. The management style of open higher education is what has already been referred to as "outside-in" planning. The methodologies and tools for this work are well developed. The UNESCO Regional Office for Education in Asia and the Pacific has an outstanding seven book program which details the planning process (UNESCO, 1982). It represents a major contribution. About planning, I shall only provide a topology of potential problems in planning by Bean and Kuh (1984) which might be of use in implementing a planning process.

SECTORS OF A COMMUNITY AND BASES OF INFLUENCE RELATIVE TO OPEN HIGHER EDUCATION



Adopted from Lasswell and Kaplan, **Power and Society**

A TYPOLOGY OF THE SOURCES OF POTENTIAL PROBLEMS ENCOUNTERED IN PLANNING

Organizational Constructs	Assessment of the Capacity to Plan	Initiation of Planning Activities	Development of the Plan	Implementation of the Plan
Goals	Level of institutional consensus	Purposes of planning are unclear Goals may change during the process Goals differ at different organizational levels Hidden agendas	Unclear expectation for planner behavior Conflicts with vested interests	Goal displacement Limitations of rational processes "Rational means to irrational ends" Adaptability
Participation	Psychological preparedness of participants	Too many or too few people Representative levels Experts Use of new or existing structures	Inadequate representation Anarchistic behavior Technical staff/faculty relationships Authority not commensurate with responsibility for planning	Reward participation Understanding change Expecting conflict Incremental adaptation
Information and communication	Access, types available Current patterns of communication	Technical aspects of planning Accuracy and relevance of information Limitations of planning	Clear understanding of planning process Periodic status reports Balanced treatment of unit data	Communicating the plan Appropriate level of specificity Feedback, evaluation and revision Degree of flexibility of the plan
Interdependence (internal, external)	Relationships between units	Appropriate scope of planning Degree of coupling among subunits Timing relative to external requirements Length of planning cycle	Involvement of units that must carry out plans Relationship to line administrators and faculty	Environmental changes Plan designed for external and not internal audiences
Resources	Time (staff) Expertise Organizational slack	Adequacy for planning process	Commensurate with unit needs Adequacy for implementation	Realistic process expectations Conflict and turf protection Continuation costs

From: "A Typology of Planning Problems, *Journal of Higher Education*," 55:1 (Jan-Feb) 1984, p. 43.

Internal Management: The Challenge of Decision-Making

The external challenges to management seem largely to represent a different genre than does the internal management challenges. Most problems external to the programs and institutional arrangements are more of the order of dilemmas--conditions which are studied, negotiated over, and somehow come to terms with. They are not amenable to the linear, rational, problem-solving, decision-making models which are taught in graduate programs for managers. Internal problems, with few exceptions, have an information base and logical organization procedure for solution. They are solvable in a problem solving sense.

The challenges which surround internal problems relate rather to characteristics such as: 1) basic organizational structure and decision-making procedures, 2) authority of managers in relation to specialists, 3) internal support for programs and activities, 4) controls over resource allocation, and 5) change strategies. In this regard there is some evidence (Fecskey, 1983, Keller, 1983, among others) that higher education management generally is becoming more in tune with management patterns of open higher education. These observations include: 1) that more authority and active intervention in programs and staffing is being exercised by managers, 2) that long range planning in an "outside-in" approach is being employed versus letting each faculty determine its own direction, 3) that innovation is being actively supported with resources, and 4) that student and "market" needs are being attended to at least as well as are the traditional offerings and fields of study. Academic leaders are recognizing that educational programs need organization and management systems that are based upon a body of knowledge and tools for "a rational assessment and systematic selection of goals and purposes; the development of strategies to achieve goals; marshalling of resources; organization, direction, and control to attain goals; and the motivation and rewarding of the people to do the work (paraphrased from remarks by Professor Theodore Levitt, Harvard University, 1984).

The internal challenges will remain: resource allocation between formal, on-site programs versus distance, off-site programs; the need driven versus traditional offering driven programs; adequate staffing and reward for meritorious effort; and the need to innovate in order to extend education for everyone.

The challenges to open higher education begin with 1) clarification of the management function and with domain definition of this field, particularly in its relevance to the totality of administration beyond higher education. There is a challenge in terms of 2) the nature of inquiry in this arena of activity extension of it beyond the forms of inquiry that are primarily descriptive. This is important to the building of a knowledge base that extends practice into the future. The challenge of 3) basic values has only been touched briefly and should be extended beyond management per se into the search for purpose definition and the mission of open higher education.

External forces represent a pervasive challenge for it is the external forces which are driving change in higher education and creating: 4) the enormous need for life long, open education. Other external challenges are: 5) high technology, 6) the information age with its social and economic impacts, 7) and the relationship of open higher education to local, national and international communities. Finally, there are the challenges arising from internal forces which include primarily those of 8) decision-making, 9) authority questions and 10) resource allocation.

Note: See Appendix E for a listing of open higher education services and delivery systems and Appendix F for a listing of key elements of management from the literature.

These ten challenges are not new or surprising to us. The changing nature of the challenges which each presents requires that we examine them carefully and work on them cooperatively. Much has been accomplished to lay a foundation for the next era which is upon us. A noted philosopher from my country has said that, "civilization is in a race between education and disaster." Open higher education is a key element in that race and history will surely hold us accountable for how the race is run.



End Notes

- Hodgkinson, Christopher, (1978). **Towards a Philosophy of Administration**. New York: St. Martins Press.
- Orloskey, Donald, et al. (1984). **Educational Administration Today**. Columbus, Ohio: Charles E. Merrill, Ch. 1.
- UNESCO, (1981). **Exchanging Experiences in Educational Planning and Management**, Bangkok, Thailand: UNESCO Regional Office for Education in Asia and the Pacific.
- UNESCO, (1975). **The Education of Adults: A World Perspective**. Paris: UNESCO, 2nd Edition.
- Mackenzie, Abe R. (1969). "The Management Process in 3-D," **The Harvard Business Review**.
- DeLanshere, G. (1982). **Empirical Research in Education**. Paris: UNESCO.
- Fecsley, Charles. (1983) **Serving Learners at a Distance**, Research Report No. 5. Washington D.C. : ASHE-ERIC Clearing House for Higher Education.
- Griffith, William S. & McClusky, Howard Y. (Eds.) (1980). **Comparing Adult Education World-Wide**. San Francisco: Jossey-Bass.
- Knox, A. B. (1981). **Adult Education Program Development and Administration**. San Francisco: Jossey-Bass.
- Keegan, Desmond J., & Rumble, Gevilles. (1982). "The DUT's: An Appraisal," **The Distance Teaching Universities**. New York: St. Martins Press.
- Guthrie, James, W. (1977). "Educational Policy Research and the Pursuit of Equality, Efficiency, and Liberty," in **Problem-Finding in Educational Administration**, Immegart and Boyd (Eds.) Lexington, Mass: Lexington Brooks.
- Debenham, J. (1980). "Mass Producing Intelligence for a Rational World" unpublished paper, The University of Utah, Salt Lake City.
- Lasswell, Harold D. & Kaplan, Abraham. (1950). **Power and Society**. New Haven: Yale University Press.
- UNESCO, (1982). **Basic Training Programme in Educational Planning and Management**. Bangkok: UNESCO Regional Office for Education in Asia and the Pacific.
- Bean, John P. & Kuh, George D. (1984). "A Topology of Planning Problems," in **Journal of Higher Education**, 55:1 (Jan.-Feb.)
- Keller, George. (1983). **Academic Strategy**. Baltimore: John Hopkins Press.
- Levitt, Theodore, 1984. Remarks at Harvard University.
- Levitt, Theodore. (1984). Remarks presented at Harvard University.

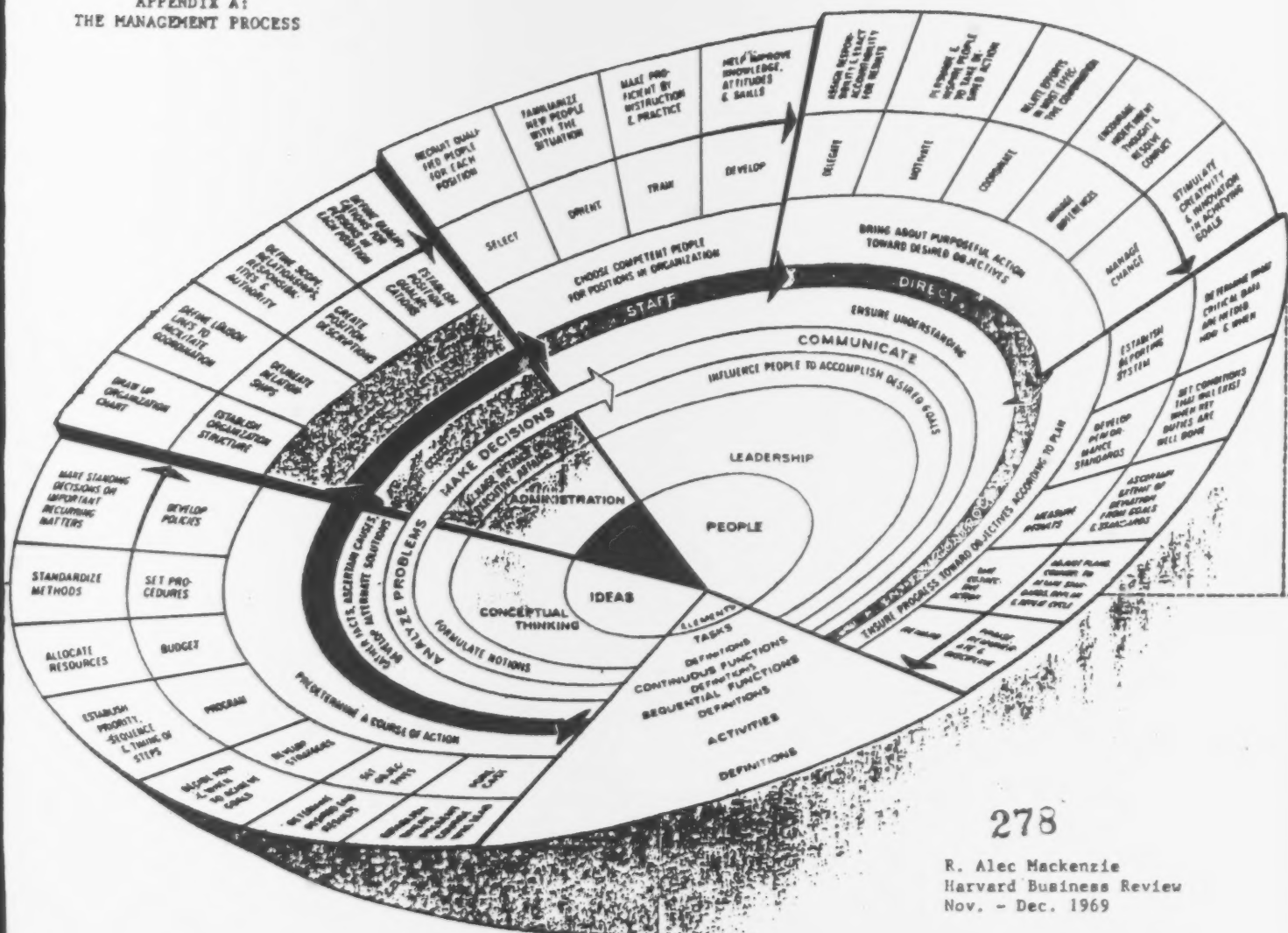
References: Not included in End Notes

- Anand, Satyapal. (1979). **University Without Walls**. Delhi: Kay Kay Printers.
- Apps, Jerold W. (1979). **Problems in Continuing Education**. New York: McGraw-Hill.
- Bates, A. W. (1980). **The Planning and Management of Audio - Visual Media in Distance Learning Institutions**. Paris: UNESCO. Final Report of an IIEP Workshop.
- Cameron, Kim S. & Whetten, David A. (1983). "Models of the Organizational Life Cycle: Applications to Higher Education, in **The Review of Higher Education** 6:4 (Summer).
- Carnegie Commission in Higher Education. (1972). **The Fourth Revolution**. New York: McGraw-Hill.

- Chaffee, Ellen E. (1984). "The Concept of Strategy: From Business to Higher Education," in **Handbook on Higher Education**, Vol. 1.
- Coles, Edwin K. T. (1977). **Adult Education in Developing Countries** Paris: UNESCO.
- Davies, W. J. K. (1979). "Open Learning or Open Access?" In **British Journal of Educational Technology**. 10:2 (May).
- Goodenough, S. (1978). **A Case Study in Distance Learning Systems: Panjab University, India**. Bletchley, England: The Open University.
- Intercollegiate Case Clearing House. (1980). **Cases in Management of Higher Education**. Boston: ICCH Clearinghouse, Harvard University.
- Jarvis, Peter. (1983). **Adult and Continuing Education: Theory and Practice**. London: Nichols Publishing Co.
- Kaye, A. R. (1979). **A Case Study in Distance Learning Systems: The Sri Lanka Institute of Distance Learning**. Bletchley, England: The Open University.
- _____. (1978). **The Allama Isbel Open University, Pakistan**. Bletchley, England: The Open University.
- Kazufusa, Moro-oka. (1976). **Recurrent Education, Japan**. Paris: OECD Center for Educational Research and Innovation.
- Knox, Alan B. (1980). **Developing, Administering and Evaluating Adult Education**. San Francisco: Jossey-Bass.
- Kreitlow, Burton W. (1981). **Examining Controversies in Adult Education**. San Francisco: Jossey-Bass.
- Lusterman, Seymour. (1977). **Education in Industry**. New York: The Conference Board. (An independent, non-profit research organization).
- Miller, James L. (1983). "Strategic Planning as Pragmatic Adoption," in **Planning for Higher Education**. 12:1 (Fall).
- Percy, Keith. (1982). "The Open College of the North West, Distance Learning and the Open Tech Programme." In **Teaching at Distance** No. 21 (Summer).
- Perry, Walter. (1978). **Teaching and Learning at a Distance: The Experience of Britain's Open University**. The Westbrook Memorial Lecture No. 15. Vancouver, Canada: The University of British Columbia.
- Prance, W. Werner. (1982). **Tomorrow's Universities: A Worldwide Look at Educational Change**. Boulder, Colorado: Westbrook Press.
- Renfro, William L. & Morrison, James L. (1983). "Anticipating and Managing Change in Educational Organizations," in **Educational Leadership**. 41:1 (September).
- Sakamoto, Takashi. (1982). "Plan to Reality: The Japan University of the Air" in **Learning a Distance: A World Perspective**. John S. Daniel et al. (Eds.). Edmonton Canada: Athabasca University.
- Schuller, Tom & Megarry, Jacquetta. (1979). **Recurrent Education and Lifelong Learning**. World Yearbook of Education. London: Kogan Page.
- Strotter, George B. & Klus, John. (1982). **Administration of Continuing Education**. Belmont, California: Wadsworth Publishing.
- Tauber, Michael. (1980). "A Computer-aided Management System in Distance Education," in **European Journal of Education** 15:3.
- UNESCO Regional Office for Education in Asia and the Pacific, (Bangkok Thailand) publications:
- I. Training Modules on: **Participatory Evaluation, Educational Decision-making, Institution Building, Decentralization of Educational Administration, and Human Resource Management**.

- II. Occasional Papers in Educational Planning, Management and Facilities: **The Effects of New Trends in Educational Financing on Plan Objectives, Education and Employment Policies in Countries of Asia and the Pacific, and A Retrospective Study on Educational Development in the Countries of Asia and the Pacific.**
 - III. Report: Regional Staff Development Workshop in Educational Planning and Management.
- Worth, Vincent. (1982). **Empire State College/State University of New York Center for Distance Learning.** DERG Papers No. 7. Bletchley, England: The Open University.
- Willingham, Warren W. (1973). **The Source Book on Higher Education.** Princeton, New Jersey: College Entrance Examination Board.

APPENDIX A: THE MANAGEMENT PROCESS



Appendix B:

Computer Models For Higher Education Management (EDUCOM): New Demand For Management Skills In The Academic World

With the introduction of computers in higher education a group of U.S. universities formed a consortium to share information about the uses of new technology for research, instruction and management. Called EDUCOM, the consortium is headquartered in Princeton University and has 360 fee paying members in all parts of the world.

The EDUCOM consortium, in 1978, put into operation the EDUCOM Financial Planning model (EFPM). Today it is the most widely used computer driven planning model in higher education. Used by colleges, extension divisions, hospitals and seminaries to plan any phase of operation--learning center, instructional programs, financial aid plans, etc.

Other organizations also exist in the U.S. to assist with management in the academic world. The American Council on Education, for instance, through its Center for Leadership Development and Academic Administration, headed by Joan McCall, runs a series of two-day colloquid for presidents, academic vice-president, and deans on subjects like academic quality assessment and control, financial planning, legal issues, and personnel selection and development and has a new department chairman training program for the estimated 50,000 academic department leaders in the nation. ACE's neighbor in the "educational Vatican" at One Dupont Circle in Washington, D.C., the American Association of State Colleges and Universities, now has a Resource Center for Planned Change which stresses better recognition of social, economic, legal, and technological trends and internal planning to respond to, get an jump on, or defend against these changes. And a Boulder, Colorado, organization, The National Center for Higher Education Management Systems, or NCHEMS, has been moving away from highly quantitative, and analytical management science activities into more decision-oriented workshops, planning, and consulting.

Thus, some of America's academic leadership is sculpting a new management style by trial and error on the job and by going to seminars and classes as they did when they were students to learn how complex organizations work, how computers can assist them, and what contemporary management and planning are all about.

Appendix C

A Comprehensive, Multi-Institutional-Lifelong Learning Delivery System For The State Of Utah

Dr. T. M. Williams, Administrator, Community Service and Continuing Education Programs

What is Proposed

The brief paper sets forth some of the features of an ambitious but feasible approach to equalizing educational opportunity in Utah.

The approach is the development of an integrated, statewide system for delivery of state's individual'-development and community-betterment cooperative, multi-institutional and multi-agency approach which cultural and other human betterment resources for those who are presently disadvantaged by geographic, economic and related barriers. It purports to be able to achieve this--to a far greater extent than heretofore--on a convenient community or neighborhood basis in a variety of scheduling and utilization patterns.

This cooperative, all encompassing approach to planning and delivery of human betterment services represents an enlargement upon emerging new concepts of college and university continuing education and the "community school" idea pioneered in Flint, Michigan, through support of the Mott Foundation. It proposes to amalgamate the efforts of a wide variety of federal, state and local agencies and institutions into a coordinated, truly comprehensive, statewide education-cultural outreach and human betterment effort.

The effort is voluntarily undertaken by a varied group of service providers, equal in status, and jointly concerned about underserved citizens throughout the state.

The approach carefully articulates role definitions, a sharing or pooling of resources and service capabilities, multi-agency consultation procedures, joint planning, and other forms of voluntary, mutually beneficial collaboration among the partner agencies.

Through this kind of cooperation the participating institutions and agencies are able to multiply their capacities for service far beyond what they are now able to achieve "going-it-alone." From this kind of collaboration and "synergism" effects makes prospects of a cradle-to-grave offering of educational, cultural, training and community betterment services to people of the entire state more than just a frustrated dream.

How This Delivery Capability Might Be Achieved

The "backbone" resource for achieving this augmented service capability is the state's **existing** college, public school and other community facilities--such facilities being utilized on an expanded more diversified schedule as multi-purpose educational training, cultural and recreational centers. Many of these facilities are not fully utilized, particularly in late afternoons, evenings and weekends. Many are now used for delivering a limited range of services, frequently those of a single agency or institution. These facilities are being transformed (more fully than they now are) into a statewide network of regional, community and neighborhood delivery points for a broad range of educational programs and related services from a variety of institutions and agencies. Some new construction is required to fully implement some of the ideas which follow.

These centers are being interconnected by a appropriate multi-agency ground-air transportation system and a multiple-option telecommunication system capable of delivering a wide variety of programs, materials and services to both center buildings and nearby homes.

The approach envisions full use of local facilities and program resources. Through the kind of system for delivery of resources described, it is possible for every community in Utah to request and have delivered to it a rich offering of courses, programs and services from outside sources. With the right kind of patron and participant input these offerings could be fine-tuned to the needs, interests and concerns of people of all ages and circumstances.

Comprehensive Community Centers

In this expanded role for local school, public library, college or other facilities, selected buildings, located within relatively easy reach of all citizens in a given community, are designated as comprehensive community centers of multiple-service-delivery complexes. Such centers serve as:

1. **A comprehensive information and referral center** through which residents of the community can become informed--and learn how to gain access to--the full range of community betterment and personal development services available in the State of Utah. At this convenient location they can learn about: (a) the broad range of public school, proprietary school, public vocational school and college/university offerings in their own and neighboring communities; and (c) a broad range of new or previously unavailable (or available only through travel to prohibitively-distant locations) programs and services which could be brought to the community by the people collaborating in the multi-agency program.

2. **A base of operations and point of delivery** for existing and presently unavailable services desired by the residents of the community in accordance with their unique needs and interests. Each center provides: (a) class, meeting, discussion and counselor or tutorial conference rooms; (b) library services (c) instructional materials distribution; (d) audiovisual equipment and materials; (e) television and movie viewing rooms, media and computer study carrels and teleconferencing facilities; (f) food service facilities (g) athletic facilities and equipment; (h) hobby and craft areas; (i) child care facilities; (j) vocational and homemaking laboratories; (k) course and program promotion and registration services; (l) ticket sales for cultural and sporting events; (m) distribution of educational catalogs, class schedules and other descriptive materials; (n) counseling-guidance services and materials; and (o) other needed support services. This wide range of materials and services, as a result of joint use of personnel and a pooling of resources in an integrated, multiple-use facility is available by delivering agencies and patrons at a relatively low cost.

3. **A point of contact through which residents participate in deciding what programs and services they would like to have available in the community.** It would also be a facility at which residents might meet with fellow citizens, local program planners and institutional/agency administrators in conceiving, promoting and implementing desired programs. The center would be a place where people could work together to: (a) identify and prioritize (with help of trained specialists and needs supporting services) community needs and problems; (b) prepare program and service requests; (c) identify and procure resources; (d) identify of conceive programs to be exchanged or shared with other communities; (e) organize in teams or groups to promote and help implement offerings; and (f) engage in a wide range of additional activities which would help assure that needed and desired programs are made available and are utilized. This kind of involvement results in some breakthrough progress in maximizing the use of local resources in bettering the quality of life in the community of helping people of all ages achieve their personal aspirations.

4. **A neighborhood location through which the local citizenry may gain access to (or arrange for delivery of) programs, technical services, facilitating resources and other services not normally available in their community.** Here, residents seek help from their

regional (or sub-regional) educational service center in arranging for (a) teachers, speakers or consultants from colleges, universities or the community-at-large; (b) specialists from state and regional agencies to assist them with various enterprises; (c) contract for performance of musical, dramatic, dance or entertainment programs of colleges, state or regional community arts associations, etc.; (d) make arrangement for touring exhibits, "packaged" training programs and the like; (e) arrange appointments with circuit-riding assessment-counseling-guidance people; (f) gain access to distance library and reference collections; plus (g) arrange for many other programs and resources from outside the immediate community to augment locally-available programs.

Comprehensive Regional Support Centers

As indicated, the prime support mechanism for the neighborhood center is a system of regional (and subregional, in some cases) educational service centers. Such centers are established in such locations as the geography population and multi-agency centers having as tenants user/representatives from appropriate human-uplift oriented organizations active in the region.

At these centers is headquartered a wide and deeper array of program developers and coordinators, resource people, counseling-guidance specialist, learning materials collections, instructional media and telecommunication facilities, etc., than can be assigned continuously and permanently to each neighborhood center.

Housed in the regional support centers are those resources which--because of scarcity, sporadic demand, limited transportability, inadequate funding and other constraints--would best be made available to local communities and patrons on a regionwide basis. Regional centers also serve as a community-level point of delivery for programs and services to those residing near the facility.

To gain access to some services, community-level planners and patrons travel to their nearest regional center. Some services and programs based at the regional centers are transported on an "as arranged" or normalized "circuit-riding" basis to the community or neighborhood centers. Some of these could be brought in on an exchange basis from other regions of the state. Each regional center also is linked to a central, State of Utah "service center and program resource pool" by the statewide ground-air and telecommunications delivery system previously referred to.

All the regional support functions are housed in a single building in the "hub" city to which the regional support function is assigned.

How the Programs and Support Systems Were Developed and Administered

Both community-level and regional centers--and the service delivery mechanisms which interconnect them into an interactive, needs-serving system--are largely autonomous entities operated and managed by public officials with inputs from the citizenry much as are the public schools and higher education institutions. Existing public school boards, institutional councils of the colleges, universities and continuing education centers in the region, community school councils, regional councils of government or patron advisory groups assume responsibility for developing the regional support and resource capabilities needed for the program they believe is feasible in the region. They are supported in their efforts by interested funding and service agencies of local, state and federal government and/or private sector foundations and public service organizations.

Regional, as well as community-level, groups and individuals also work together in generating the kinds of programs and services they would like to see delivered to them through the multi-organizational system.

Ideally, every citizen in a given region could be given an opportunity to input into the program development proceedings. It might be possible and desirable for the varied partners in the enterprise to develop a cooperative needs/interests assessment and sentiment-sampling mechanism to assist in planning the initial programs and service offerings for delivery via the expanded capability. Hopefully, a permanent cross-agency needs assessment and program evaluation mechanism will evolve to enable agency programmers to offer, on an ongoing, cost-effective basis, the specific programs people want and need. Hopefully, offerings generated in this manner would be economically feasible due to the collaborative relationships, facilities sharing, resource pooling arrangements and the more efficient delivery mechanisms developed through coordinated local, regional and statewide planning as suggested in this paper.

Administering and Conducting the Program

As was indicated, the community centers in a given region are connected to--and receive a wide variety of supporting resources and services from--a nearby regional (or sub-regional) service center. Where regional centers are located on a college campus, the continuing education dean or director (or his designee) doubles as center administrator and as administrator of the continuing education/community service offerings of his or her institution. He or she also acts as an agent for other colleges and universities offering programs and services in the region.

Where the center is located in a building owned by a public school district, the center administrator is the district community school coordinator doubling as the building administrator and regional community school coordinator. The center administrator serves as the community school coordinator and counselor for the public school district in which the building is located.

Higher education program coordinators and counselors serve the entire region from the regional service center. All offering institutions legitimately active in the region are shared-users of the delivery system radiating out from the regional center into college buildings, public schools, libraries, homes, and other community-level delivery points. Program coordinator-counselors and other out-stationed personnel from state agencies having training-related programs for delivery through the system can also be tenants.

All agencies and institutional tenants electing to house "out-stationed" planners and programmers in the regional centers retain full operational autonomy in the conduct of their programs. Their relationship with the center administrator is similar to that which businesses and professional people have with the facilities manager when they contract for space and "set up shop" in a commercial shopping mall. Except for the usual housekeeping rules and other traditional landlord prerogatives, tenant agencies operating out of the regional service centers are responsible to the center administration and other tenants in no way in carrying out their legally-sanctioned and traditional services functions. However, it is assumed that having outstationed people from a variety of agencies "doing their own thing" under the same roof would encourage and facilitate mutually beneficial, **but voluntary**, cooperation and resource sharing. It also facilitates appropriate multiple-agency program planning and other forms of collaboration in meeting the service expectations of a wide variety of patrons.

Implementation

The program was phased to provide an initial period during which public officials, educators, business and professional people, potential patrons and other concerned parties were fully "briefed" and given assistance in assessing the relative merits and demerits of collaborative, multi-agency delivery approach.

The exploration proceeded from the outset with the full concurrence and active leadership of the top administrators of educational and other interested human-needs-meeting agencies of local and state government. In the key education and government agencies assuming the leadership initiative.

The emphasis in this exploration was on the delivery of the education and training aspects of the state's personal development and community betterment enterprise. However, all agencies having human needs--meeting outreach programs which might be enhanced by delivery mechanism which as envisioned here were invited to join in the exploration. Participation was on a voluntary basis with firm assurance that no institution or agency would be placed in a subordinate position relative to others.

Appendix D The New Knowledge Industry Taken From A Paper Mass Producing Intelligence

by
Jerry Debenham
The University of Utah

Computerized analytical decision making has been significantly promoted in recent years by advances in operations research, statistical decision theory, and systems analysis. Econometrics is a branch of the business world which is extensively catering to this need for sophisticated computer decision assistance. The Club of Rome studies are among the best examples of this type of development in social areas. The social planning models of MIT, Harvard, and Columbia, however, have not found general application in any decision environment.

Why has computer automated rational decision analysis not been widely applied outside of the business world? Until recently, there have been no computer automated **all-purpose** analytical decision models. Sophisticated matrix languages such as APL had to come into their own and programming techniques which allow the computer to "reprogram" itself had to be created. Prior to these developments, almost all computer decisions models were designed with specific applications and were soon outdated. Second, development of specific or special purpose computer models has been very expensive, often costing hundreds of thousands of dollars. Third, models were inflexible. Since decision environments tend to change rapidly, it must be possible to change the content of models almost instantaneously.

Finally, computers have been relatively inaccessible and expensive. Only recently have time-sharing systems, inexpensive mini-computers, and portable terminals overcome these obstacles.

The CADA system is designed to overcome each of these limitations of computers, as well as objections to rational decision analysis in general. Better, more consistently rational decision making must occur if we are to survive this next century of crisis. We believe that CADA is a significant step in that direction.

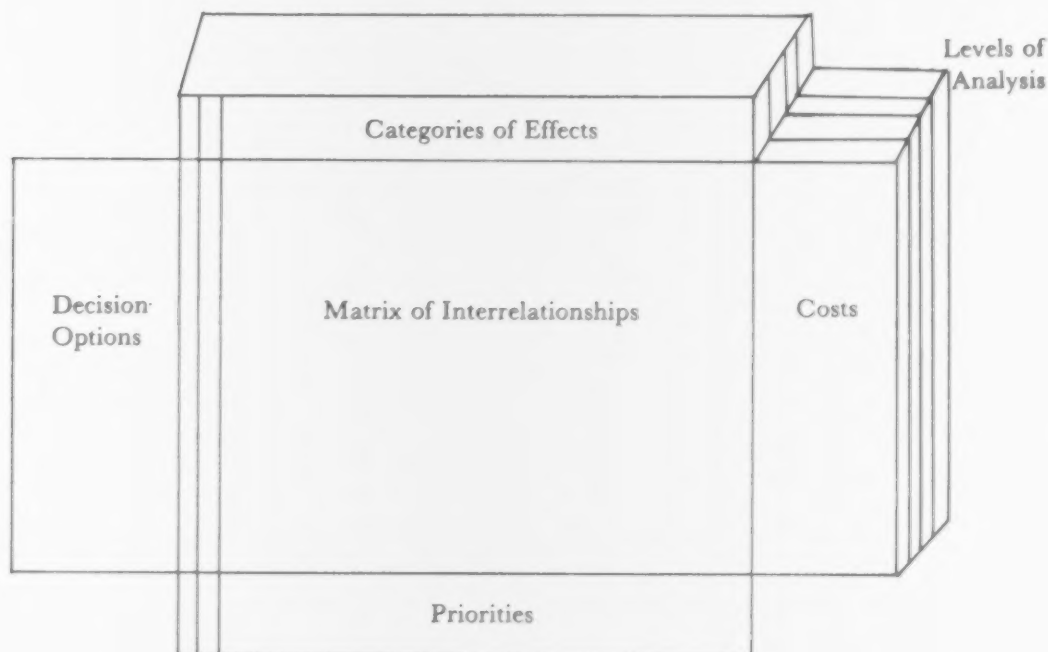
Theoretical Foundation

The computer decision systems we are proposing are simple to use and yet have innumerable potential applications. The basic model consists of the following four elements as the basis for rational⁴ decision analysis: 1) decision options; 2) categories of effects; 3) priorities; and 4) cost. These are related by the following basic formula:

$$\text{Desired Option} = \frac{\text{Anticipated Effects} \times \text{Priorities}}{\text{Anticipated Costs}}$$

Complex variations of the formula are applied depending upon the number of options and categories of effects considered, anticipated variations in these effects over time, as well as changing priority and cost levels. The figure below shows how these elements can be used in a decision matrix for systematically analyzing almost any type of social or personal problems.

General CADA Model of Decision Analysis



⁴The "rational-deductive" ideal to which we refer has been debated by social scientists and philosophers over the last several centuries. Our use of the word "rational" refers to a general consensus of philosophical opinion summarized by Braybrooke and Lindblom as follows:

"... determination of policy becomes simply a matter of calculation, a question of feeding in the observed facts and thinking consistently through a sequence of logical transformation. One discovers the facts, looks up (or derives) the relevant hypotheticals, and deduces by strict logic which policy is to be selected. Nowadays, the work does not even seem impossible tedious; one imagines that a suitably programed computer could do it."

David Braybrooke and Charles Lindblom, *op. cit.*, p. 10.

The CADA approach to rational decision making requires the user to perform the following operations:

1. Exploration of a full range (1-x) of meaningful or possible variations or decision option (DO_{1-x}) before acceptance or rejection;
2. Identification of all the categories of effects (CE_{1-x}) which are relevant (i.e., political, economic, quality of life, social, and education effects);
3. Quantification (Q) of the impact of any or all of the alternative decision options upon each or all of the categories of effects and organized into a first dimensional matrix (MAT):⁵

$$MAT = ((DO_x), CE_x)_e Q$$

4. Projection of the costs (C_{1-x}) of alternative decision options under alternative implementation plans;

5. Study of alternative priorities (P_{1-x}) for analyzing the various categories of effects upon different value orientations (i.e., minorities, business, religious leaders, etc.).

Actual decision analysis in CADA varies from one application of the model to another along the following progression of complexity;

A) Comparative Desirability Models- The computer selects among all options in the matrix (MAT) using the basis formula for comparative desirability. This may be expressed as optimums:

$$\frac{MAT_{1-x} \times P_{1-x}}{C_{1-x}}$$

or as rank order:⁶

$$\frac{MAT_{1-x} \times P_{1-x}}{C_{1-x}}$$

B) Selective Desirability Search Models- In these models, the computer searches for particular groups of variables (CHOICE) in the matrix:

$$\frac{MAT (;CHOICE) \times P (CHOICE)}{C}$$

and may give optimums or rank orders.

c) Diagnostic Value Models- The computer now uses two or more matrices (MAT_{1-x}) to make comparisons before the basic formula is applied. For example, "actual" may be compared to both "ideal" and "real".

$$((MAT_1 - MAT_2) \times P_{1-x})$$

These may also be indexed for traits and listed by rank order or options.

D) Multiple Order Simulation Models- It is often important to trace the effects of decisions through many orders of analyses (OR_{1-x}).

The CADA model can take the first two dimensional matrices of decision logic and extend them into a third through nth dimension of effects analysis.

⁵APL notation for creating such a matrix.

⁶ is an APL symbol for rank order from highest to lowest.

$$OR_1 = MAT(CHOICE_{1-x}; CHOICE_{1xy})$$

MAT_x is a matrix of effects upon effects

$$OR_2 = MAT_{x(1-x)} \times OR_1$$

To the nth dimension

$$OR_N = MAT_{x(1-x)} \times OR_N$$

For example, we may conclude in the level one analysis that OPEC oil price increases have significant effects in 120 dimensions of world economic analysis. These are first-order effects which may be calculated by intuition, delphis, or empirical studies and may be represented in the matrix by directional numbers or algorithms. It is important to determine how these first-order effects further affect other dimensions of analysis. If an energy strategy is adapted and decreases oil consumption according to certain empirical measures, how does this affect employment, for example, a second-order effect? How do these changes eventually affect world peace, a fourth-order effect?

E) Full Simulation Models- By combining a number of multi-order matrices, a simulation of a "complete" system may be created. Many of our simulation games for teaching and research are on this order.

F) Reasoning Simulation Models- By combining several system simulation models, it is possible to create a "responsive" simulation in which the computer uses the strategy of achieving objectives in one system by the responses it gives in another.

In sum, there are three distinct features of the CADA models which make them vastly more useful in rational decision making than other systems previously designed:

1. They are general logical models which can be applied to any specific subjects area depending upon degree of complexity desired by the user. Rather than designing specific algorithmic interrelationships between variables as in most business simulations, only the general logic structure is algebraically related in CADA.

2. The models are infinitely flexible in the sense that they can handle any number of variables or types of interrelationships. In a sense, they "expand" and "contract" according to the demands of the user. All variables are readily changed by simple English commands.⁸

3. Interrelationships are expressed in terms of a matrix rather than specific algebraic equations. Rather than tracing effects through hopeless quagmires of complexity, they are expressed in numerical directions and desirability is achieved by use of variations on the basic formula in spiraling orders of analysis.

⁷An example of this is the simulation Negotiate developed at the University using the basic CADA approach. See 00916, "Simulating Teacher Negotiations," **Proceedings of the 16th Annual Conference of the North American Simulation and Gaming Association**, Nancy Roberts, Editor, 1973.

⁸Although the CADA model's change routines are currently in English, they can be readily translated into any language.

Appendix E

Delivery Systems In Open Higher Education

- I. Scheduled Instruction
 - 1. Skill Development: workshops, clinics, short courses, skills centers.
 - 2. Formal Courses: where groups can be formed - off campus centers, factories and business, schools, clubs, churches, hospitals.
 - 3. Individual/small group, self-study: Radio and TV (one or two-way),*
 - 4. Computer based.
- II. Action Programs
 - 1. Applied research to solve a community farm or business problem.
 - 2. Technical assistance, as with farm agents.
 - 3. Demonstrations.
 - 4. Special Projects, as with homemaker groups or clubs.
 - 5. Community action groups.
- III. Individual Services
 - 1. Counseling, testing.
 - 2. Tutorial study.
- IV. Guided Experience
 - 1. Personnel exchanges, visits.
 - 2. Apprenticeships, internships.
- V. Information Services
 - 1. Mass media: print, film, telephone, broadcast.
 - 2. Information retrieval systems.
 - 3. Telephone dial access.
 - 4. Traveling libraries, book mobiles, classroom on wheels.
 - 5. Exhibits, fairs.

*TV can be broadcast; fixed service with a) closed circuit, b) cable feed, c) satellite; video disc or cassette.

Appendix F

Management Elements Identified In The Literature

Open higher education units are unique in management practices in several important ways:

1. Units are often planned and managed by partnerships of academic and nonacademic specialists than are campus based units. This is largely because collaboration is needed to produce materials for distance learning which is a complex and costly process.
2. Research relating to program development and the evaluation requires a variety of studies and information gathering which is valuable to management and to accrediting and controlling agencies.
3. There is the need to relate to a wide variety of "publics" and to communicate with them on a regular basis. The entire effort depends upon meeting client needs rather than relating to specialists in traditional fields of study.
4. Managers are more controlling and become directly involved in program and personnel decisions. Managers in the higher echelons of traditional institutions exercise little direct control.

Management elements for Open Higher Education treated in the literature as topics:

Fecsley, Charles **Serving Learners at a Distance**, 1983.

Organizational Forms	Evaluation
Planning	Accreditation
Management and Governance	Student Assessment, Feed back
Finance	Research Examinations

Strother, Gerge and Klus, John P. **Administration of Continuing Education**, 1982.

Assessing Client Needs	Organization
Program Planning	Budgets and Finance
Delivery Systems	Faculty and Staff
Program Promotion	Student Services
Program Evaluation	Public Relations

Knox, Alan B. **Developing, Administering, and Evaluating Adult Education**, 1980.

Approach	Participation
Program Origins	Resources
Objectives and Activities	Staffing
Program Evaluation	Leadership

Willingham, Warren W. **The Source Book for Higher Education**, 1973.

I. Access Process	II. The System	
Student Guidance	Curriculum	Organization and
Finance	Evaluation	Administration
Admissions	Staffing	Structure
III. The Students	IIV. Access, Agents	
Talents, Needs	Organization	
Educational Opportunities	Programs	
Groups		

V. Information Sources

Periodicals -journals, reports

Statistics, newsletters

Special resources - data system,
information centers, general
references.



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Supporting Paper I

AUSTRALIAN/MALAYSIAN COLLABORATION IN TEACHING UNIVERSITY MATHEMATICAL AND PHYSICAL SCIENCES AT A DISTANCE *

Writing in 1981, the coordinator of the Off-Campus Academic Programme at Universiti Sains Malaysia described their distance teaching quite modestly, as "in its embryonic stage of development" (Ali Ahmad, 1981). In fact the achievements are substantial. Nine hundred Malaysians have obtained bachelor degrees in Humanities, Social Sciences and Science (Mathematics, Physics, Chemistry, Biology) through USM's Off Campus Programme during the period from inauguration in 1971 until 1983 (1). With about 30 percent of USM's BA and BSc enrolments in the distance teaching mode, and achieving about 65 percent graduation from each intake, Off - Campus has secured the confidence of policy makers.

USM has firm plans for major expansion of distance education (DE) enrolments, in accordance with national priorities for the supply of graduates, and its role as the sole provider of University level education in this mode. Off-Campus enrolments, now about 1000 students, are projected to double in the next 5 years (Leong and Dhanarajan, 1983). To achieve this expansion, USM is making a particular effort to utilise international resources for staff development and improvements to course design. The Library has the necessary resources, including a wide range of samples of DE materials; a high proportion of USM staff have overseas experience from higher degree work, study leave or conference travel; formal courses are available for staff training (Elton, 1981; Elton and Manwaring, 1981); a number of consultants on distance education have worked at USM (for example, Jenkins and El-Bushra, 1982; Gough, 1983); and in 1981 USM conducted a major conference on distance teaching (Dhanarajan and Lim, 1981).

Indeed the situation facing USM staff in DE is similar to that which occurs in many institutions in Australia : an established DE system which is exchanging with the rest of the world a flood of information and ideas on what to do and how to do it. How were we to plan our part in the DE development project which Deakin and Murdoch Universities commenced with USM in 1983, under sponsorship from the Australian Universities' International Development Program (AUIDP)?

In this paper we try to identify a "development theme". We sought a way to structure our information exchange with USM for coherence and effectiveness, by analysing key aspects on the DE context at USM, with particular reference to sciences and mathematics. We show how these perceptions influenced our part of the AUIDP-USM project and, linked it to developmental work with Murdoch's DE courses.

Aims of the USM-AUIDP Distance Education Project

Proposals for this project emerged at the time of a major restructuring of the USM Off-Campus Programme, which now provides for a minimum of five years of part-time distance learning, followed by one year of full-time on-campus study. As all first degrees are with honours, the normal study period for full-time students is four years. Off-campus students in science are required to complete a double major chosen from Mathematics,

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Director of External Studies, Murdoch University, Western Australia

Physics, Chemistry and Biology. A progressive phasing in of the new curriculum commenced in the 1983-84 academic year. In conjunction with redesign of the science curriculum, including detailed specification of the content and objectives for each course, USM aimed to upgrade the design of printed materials, introduce new media, accelerate the changeover from English to the national language (Bahasa Malaysia), and improve the delivery and student support services.

The USM courses are usually the work of one academic, seconded from a School for a period of one or two semesters, and assisted by a variety of services. Staff in the Off-Campus Unit are the main providers of internal services, but the scope for editorial and design consultancy is constrained by the limited numbers of permanent academic staff in Off-Campus. The main external assistance for the academics working in 1982-83 on the new courses for 1983-84 was a month-long writing workshop (Jenkins and El-Bushra, 1982). Participants in this workshop endorsed suggestions for a longer period of training in course writing at overseas institutions. Thus in 1983 the main external assistance for the new course writers was conceived as three-month "internships": 6 writers from Humanities and Social Sciences attending Deakin University (June-August 1983); 4 writers from Mathematics and Physics at Murdoch University (August-November 1983); and 4 writers from Chemistry and Biology at the Open Learning Institute, British Columbia (Timmers, 1984). The groups at Deakin and Murdoch Universities were sponsored by AUIDP; additional funds for engaging temporary staff were also provided by AUIDP.

The initial aims for the present project were to develop practical skills in writing DE materials, for staff who were well qualified in their disciplinary specialities, but not intending to become DE specialists. These aims are consistent with outcomes from earlier years, and reflect the continuing influence of some contextual factors. Firstly, the emphasis on writing skills arises from the importance of integrating study organisation and active learning exercises into the conventional text exposition of course content, and the relatively low availability of appropriate text books and audio-visual materials either prepared in Bahasa Malaysia or translated from another language. Secondly, the emphasis on disciplinary speciality is in accord with the usual practice of matching undergraduate teaching duties to an academic's specialist expertise. For example, organic chemists teach organic chemistry, but not physical or inorganic chemistry. As similar specialisations occur in each of the science disciplines, the training for course writers must be repeated each year for a new group of academics.

We commenced the Murdoch part of the present project by expanding the initial aims into a detailed "statement of expectations" about the desired outcomes, which was modelled on ideas about learning contracts. The "statement of expectations" developed from a study of the context for science DE at USM and the needs of the major parties: the four USM staff allocated to Murdoch, and the distance students who enrol in these courses (2). We wanted to avoid focussing our expectations entirely on the techniques of writing for distance students. We wanted purposeful writing, directed by a tight link to the major developmental tasks which face science DE in the USM context.

Development Context For Distance Education In Science

The most immediate task for USM Off-Campus is to improve completion rates in Science courses, which are lower than the completion rates in Off-Campus Humanities and Social Sciences, or Science in the on-campus mode. (The completion rate is the number of students who complete a course successfully, expressed as a fraction of the number of students

who commenced the course). In particular, Science is striving to achieve a better relativity in opportunities for bumiputra (ethnic Malay) and non-bumiputra students. In Humanities and Social Sciences the numbers of graduates for the major ethnic groups are in accord with the allocations of university admissions, but Science is experiencing difficulty in attracting and retaining bumiputra students. This contrast between "arts" and "sciences" is less significant in on-campus classes, which have satisfactory completion rates for all groups. In the context of problems with completion rates in Off-Campus Science, the developmental task focussed on a search for insights into the characteristics of distance learners, which could indicate potential innovations and refinements in course design and delivery. The question to be asked is why DE "works" for a particular group in some disciplines of study, but not in others.

A further task for USM is to refine the organisation of staff resources for DE in the context of a two mode campus. For most academics in USM Science, workloads in conventional face-to-face teaching predominate over the less regular allocation to preparation of DE courses. Furthermore, few academics are involved directly in distance tutoring, which is conducted by part-time staff while in most cases the contacts which full-time staff have with their DE students are confined to the annual on-campus sessions. The addition of the DE mode to existing teaching leads to problems in organising the optimum combination of disciplinary specialists, who determine what the course objectives are, and DE specialists who can provide essential guidelines on how to achieve those objectives.

In addition to the major tasks, several other aspects of the USM context influenced the project planning. We formed a subjective impression that USM academics are achieving high standards in writing printed materials for DE courses. The four USM staff allocated to Murdoch were not a group of novices. Therefore we expected them to participate in our distance teaching and to provide informed criticism of our courses, in addition to their work on their own courses. As USM has been importing academic expertise for many years, we felt that a "collaborative" style should be promoted for the project by linking it to the efforts to improve Murdoch's DE courses.

The four USM staff allocated to Murdoch, though strongly committed to their respective DE courses, were not potential full-time specialists in DE. Thus the expectations about their longer term involvement in DE were agreed as "being able to act as resource persons : a source of advice to colleagues, as catalysts for innovation, and critical reviewers of course design" within their respective Schools.

Learner Characteristics And Distance Teaching Style

Returning to the question of why DE "works" for a particular group in some disciplines of study but not in others, we emphasised "a belief in the importance of recognizing individual differences not just in ability, but also in personality and motivation" (Entwistle, 1981). Recognition of the influences of personality and motivation factors in distance learning, though occurring frequently in DE literature, is not guided by theoretical insights. This gap may have occurred because DE research into preferred styles of learning is deterred by the risk of finding that some types of students should not enrol in DE because their preferences are quite inconsistent with the style offered by DE courses. In the absence of constructive interpretations from DE research literature, we examined cognitive style research for insights into science DE problems (Entwistle, 1981; Wilson, 1981; Messick, 1976; Witkin, 1976; Witkin et. al., 1977).

The field dependent and field independent dimension of cognitive style, studied extensively by Witkin's group (Witkin et. al., 1977) was selected as a stimulating model for

sensitising science courses writers to issues in distance learner characteristics, rather than as a construct with proven relevance. Research results in the Malaysian cultural context were not available, though there are some indications that Malaysian DE students perceive themselves as "disadvantaged" because their expressed needs for personal and social contact, and explicitly directive study materials are not fulfilled (Choo, 1981). Wilson (1981) commented on the relevance of this dimension:

Cognitive style has implications both for what students learn and how they should be taught. Field dependents pay more attention to social materials and learn and remember them better; they are also more susceptible to external motivation and sensitive to personal criticism; they find it difficult to structure material, but can learn materials which are highly structured, such as programmed learning, as effectively as field independents; they tend to pay attention to the salient cues in a learning situation and may neglect the less salient, and, as suggested above, they adopt passive as opposed to active learning strategies. (p.141)...the research highlights important individual differences in perception which explain why students are likely to find certain fields of study congenial. Although students working within the subject area which matches their cognitive style do appear to have somewhat higher achievement than unmatched students, perhaps the more important contribution of the research to the study of academic performance is in helping to explain such factors as persistence, drop out and transfer. (p.142)

Distance learning in science may confront relatively field dependent students with two major disadvantages. Firstly, Witkin et. al. (1977) review evidence that field independent students tend to favour and perform better in mathematics-science based disciplines which call for particular analytical, spatial visualization and restructuring skills. Secondly, field dependent students display greater attentiveness to social cues (Witkin et. al., 1977), and it seems reasonable to infer that if we do have relatively field dependent DE students, they will be disadvantaged by having a very high proportion of their study conducted alone, without immediate, socially oriented, verbal reinforcement. Chuah and Myint (1981) prefaced their suggestions for improvements in the design of self-instructional materials for USM Off-Campus with the comment:

Self-instructional materials may not work well with students who require prodding by other people. It can be a very lonely experience. Usually, the self-instructional method is best used with other methods of instruction, e.g. discussion at the Regional Study Centres. (p.5)

The USM science curriculum does not have a course which provides explicitly for beginning students to acquire and practise the skills required for successful DE study. Induction of students into DE is therefore conducted within the context of conventional first year subject areas. As economic circumstances generally preclude significant use of individual telephone tuition, and a system of formative assessment through assignment interchange is not well developed (Chuah and Choo, 1981), socially oriented support or "prodding" which may be critical for field dependent students is confined to face to face tutorials with part-time tutors at intervals of one to four weeks. Off-Campus also has a half hour radio broadcast each week on the national network. A further problem arises from the strategy for managing the high demand for access to university study, which prevents students who have been awarded a DE place in Science from changing to Social Sciences, Humanities or on-campus study. The alternatives are to persist in Science DE, or withdraw

from the university. Given this picture, and assuming that at least some of the Science DE learners are field dependents, what are the practical implications for a course writer? We insisted that at least some of the students in DE courses will:

- (a) show greater attentiveness to social cues; seek verbal messages with social content; prefer a personalised, conversational style; and appreciate simulated tutorial discussions on audio tapes.
- (b) benefit from personalised, supportive feedback provided by tutors who are sensitive to cognitive style issues.
- (c) prefer and expect their learning to be highly structured with minimal uncertainties about techniques, and explicit directions wherever possible on resolving learning difficulties.

These emphases, added to conventional advice on distance methods and media, are not novel, but the development of new styles of design is easier if backed by a basis for understanding why certain features are desired. We feel that cognitive style research in dimensions such as field dependent and field independent does offer a basis for exploring relationships between personality, motivation, and the design of DE courses. This issue is not exclusive to science DE at USM; the potential relevance extends to all cultural and disciplinary contexts. In our planning and conduct of the project at Murdoch, we emphasised in individual discussions and seminars that we were linking Murdoch and USM needs, in a common approach to knowledge and attitudes about cognitive style characteristics of distance learners.

Turning to the question of cognitive ability characteristics, we followed Messick (1976) in distinguishing ability and style, and continued to link the needs of Murdoch and USM students. Murdoch provides "bridging" DE courses covering any gaps which students may encounter between their educational backgrounds and the level and content of the tertiary admission examination syllabus in mathematics (including calculus), physics or chemistry. Murdoch students enrol in whatever combination of bridging courses is required for their programmes; the enrolments earn credit towards a degree. By contrast, the USM bridging DE courses do not earn credits towards a degree. Courses in mathematics, physics and chemistry are taught by Off-Campus in "Kursus Sains Pemulihan" (Science Foundation Course) for bumiputra students. However in other aspects the USM and Murdoch courses are similar, particularly in the aspect which we identified as "cognitive level". We aimed to emphasise developmental models of student learning, for example as in Wilson (1981); hence the focus on "level" rather than "ability", and a deliberate use of elementary courses as sources for illustrative examples when discussing conceptual difficulties.

Examples of contrasts between expected and observed competencies with problem solving in tertiary science and mathematics were obtained from Murdoch courses, USM courses and elsewhere - typical sources included Thornton (1982), Herron (1975), Fuller (1982) and Karplus (1977). Our discussions covered a variety of interpretations of conceptual difficulties and strategies for overcoming these; the main point was to review teachers' attitudes. Conceptual difficulties in mathematics and science courses may be perceived as evidence for low ability, or as characteristic for a particular level of cognitive development, depending on the teacher's attitude. The rich variety of models now available for understanding student learning in higher education, as in Wilson (1981) and Entwistle (1981) for example, does not lead readily to acceptance by scientists and mathematicians that weak students can "learn to learn". It seemed to us that the spectrum of teacher attitudes was similar at USM and Murdoch: "low level" teaching has a low status, and most teachers have high or even unrealistic expectations about students' acquisition of concepts and skills in

prior courses. Nevertheless, we persisted with the view that DE courses, particularly first year courses, should contain a variety of learning pathways, for example as in Jennings and Atkinson (1982). Using a broad analogy to Piaget's theories (e.g. as in Fuller, 1982), use of both "concrete" and "formal" pathways is desirable for a wide range of science and mathematics learning tasks; to not do so is ignoring an important characteristic for many DE learners.

We recognise that a productive understanding of learner characteristics does not guarantee improved design of DE materials. The mathematics and physics staff who were teaching courses similar to those in preparation by the USM academics provided critical comment on the draft materials. This process depends upon drafts in English; we have no expertise in scientific Bahasa Malaysia. However in this way we reviewed as best we could the basic techniques of writing for DE students. This commitment to "course development" continued in parallel with the study of learner characteristics which was directed at "staff development". We sought to incorporate into the draft courses model applications arising from the study of learner characteristics, wherever possible within the time and resource constraints. For example, a draft audio tape for "Matrices and Determinants" simulated a tutorial style discussion for students who may possess field dependent styles.

A Development Theme

"Learner characteristics" emerged as a development theme during the planning and conduct of this project. The exchange of information between practitioners, even in the relatively young area of DE, threatens to be overwhelming unless a structured approach is available. The focus on learner characteristics is little more than standard advice to writers: know your audience. The broad division, between cognitive style as exemplified by the field dependent and field independent dimension, and cognitive ability from a developmental perspective, may be based only on qualitative evidence. However we see no harm in having all parties, whether USM or Murdoch, conventional lecturer or DE specialist, working within the context of a research front. We anticipate that cognitive style research will provide a coherent and effective framework for DE design decisions in a wide context. Thus the development theme of learner characteristics applies also to the Murdoch DE context, creating a collaborative link between DE work at both institutions.

Notes

- (1) All statistical data have been provided by the Off-Campus Academic Programme, USM.
- (2) This study and other preparations for the project were undertaken by Roger Atkinson during a 3 month visit to USM prior to the commencement of the internships at Murdoch; the provision of facilities by USM and support from AUIDP is gratefully acknowledged.

Acknowledgements

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References

- Ali Ahmad (1981) Country report on distance education in Malaysia, in **Proceedings of the Regional Symposium on Distance Teaching in Asia**, Penang, Universiti Sains Malaysia.
- Choo, J. (1981) Some aspects of the Off-Campus Academic Programme at Universiti Sains Malaysia, in **Proceedings of the Regional Symposium on Distance Teaching in Asia**, Penang, Universiti Sains Malaysia. An edited version of this paper appeared in **Distance Education**, 2 (1981), 220-227.
- Chuah Chong Cheng and Choo Piang Fong, P. (1981) Assessment in distance education : the Universiti Sains Malaysia experience, in **Proceedings of the Regional Symposium on Distance Teaching in Asia**, Penang, Universiti Sains Malaysia.
- Chuah Chong Cheng and Myint Swe Khine (1981) Self-instructional methods for distance education in the context of Universiti Sains Malaysia, in **Proceedings of the Regional Symposium on Distance Teaching in Asia**, Penang, Universiti Sains Malaysia.
- Dhanarajan, G. and Lim, M. (1981) **Laporan Simposium Serentan Pengajaran Jarak Jauh Di Asia** (A report on the Regional Symposium on Distance Teaching in Asia), Penang, Universiti Sains Malaysia.
- Elton, L.R. (1981) Staff development at a distance, in **Proceedings of the Regional Symposium on Distance Teaching in Asia**, Penang, Universiti Sains Malaysia.
- Elton, L.R. and Manwaring, G. (1981) Training and education of teachers in higher education in developing countries, **Higher Education**, 10, 131-140.
- Entwistle, N. (1981) **Styles of Learning and Teaching**. Chichester, Wiley.
- Fuller, R.G. (1982) Solving physics problems - how do we do it?, **Physics Today**, 35, 43-47.
- Gough, J.E. (1983) Universiti Sains Malaysia: A new decade in distance education. Unpublished report, Australian Universities' International Development Programme and Universiti Sains Malaysia.
- Herron, J.D. (1975) Piaget for chemists, **Journal of Chemical Education**, 52, 146-150.
- Jenkins, J. and El-Bushra, J. (1982) Report on Writing Workshop and Visit to Off-Campus Unit. Unpublished report, Universiti Sains Malaysia.
- Jennings, P.J. and Atkinson, R.J. (1982) Learning computer programming at a distance, **Distance Education**, 3, 157-169.
- Karplus, R., ed (1977) **Science Teaching and the Development of Reasoning**. Berkeley, University of California.
- Leong, W.H. and Dhanarajan, G. (1983) Distance science education at Universiti Sains Malaysia - problems and issues. Unpublished paper presented at the XV Pacific Science Congress, Dunedin, New Zealand.
- Messick, S. (1976) Personality consistencies in cognition and creativity, in S. Messick, ed, **Individuality in Learning**. San Francisco, Jossey-Bass.
- Timmers, S.F. (1984) Transfer of science distance education expertise. Unpublished report, Universiti Sains Malaysia, Open Learning Institute and Canadian International Development Agency.

- Thornton, M.C. (1982) Piaget and mathematics students, in R.G. Fuller, ed, **Piagetian Programs in Higher Education**. Lincoln, University of Nebraska.
- Wilson, J.D. (1981) **Student Learning in Higher Education**. London, Croom Helm.
- Witkin, H.A. (1976) Cognitive styles in academic performance and in teacher-student relations, in S. Messick, ed, **Individuality in Learning**. San Francisco, Jossey-Bass.
- Witkin, H.A., Moore, C.A., Goodenough, D.R. and Cox, P.W. (1977) Field-dependent and field-independent cognitive styles and their educational implications, **Review of Educational Research**, 47, 1-64.

Concluding Comments

1. I wish to thank the Ramkhamhaeng University for its generosity to me.
2. I hope my paper meets their expectations.
3. The paper is intended to be mildly controversial, but its real intent is to expose myths that the affluent, developed countries perpetrate in higher education.

It is intended also to promote a sense of realism for developing countries which, although sending delegates for open higher education, all too often acquiesce about the use of the new technologies.

In practice - you, the developing countries cannot afford their general use, that is, unless you are merely educating an elite on a restricted basis.

4. I have attempted to give an honest picture of the perceived strengths and weaknesses of open higher vocational distance education at TCI.
5. We are still proud of, and cling to an egalitarian philosophy towards education.
6. We need more research, but see Reference 1, not from those who themselves have no experience of open distance education, but wish too often to undertake the research to obtain a Ph.D.
7. We are not "merely papering over the cracks with the new technologies".
8. We are not uncritical of our own Department of Education nor of our A.A.V.A. (formerly T.C.A.).
9. We are instituting distance education tutor training programmes. We shall have them evaluated independently of TCI.
10. We do not accept that our open higher vocational distance education at TCI is, on its own, the last word. I have indicated this, together with some New Zealand solutions.
11. My colleague, the Principal, was amazed recently, when in Jakarta, that the D.G. of Higher Education there had never heard of TCI! He had heard of and read about the Open University. Why? Perhaps we in New Zealand have been too modest about our achievements and growth (increase in enrolments) during 38 years in the field.

When I return, I shall ask my Principal that we write articles suitable for I.C.D.E. Bulletins, and targeted to the developing countries.

12. We have already hosted distance teachers/administrators from India, Singapore and Thailand. We shall welcome more, those from developing countries who wish to study our successful methods of open higher vocational education.

13. I must clear up one point. I am not, in any way, opposed to education those interested in the Arts. We all need liberal thinkers, but developing countries need, also, for their scarce educational dollars those who can increase food and material production, utilize better their own work forces to replace imported products.
14. I shall welcome questions based on my paper and, hope-fully, from those from the other open higher vocational education sector.

References

1. Callaghan C J — Some Ideas for Developing Distance Education. Tutor 23 — Journal of the NZ Tutor Training Unit (TTU) November 1981.
 2. Baath J A — Pride and Prejudice Among Distance Educators. IDCE Bulletin, Vol. 5, May 1984.
 3. Rumble G and Keegan D — 1982: General Characteristics of the Distance Teaching Universities. In Rumble G and Harry K (eds), 1982: The distance teaching universities. London: Croom Helm.
 4. History of the New Zealand Technical Correspondence Institute 1946 - 1980 (NZTCI).
 5. Annex 1 — Course Index — New Zealand Technical Correspondence Institute Prospectus 1984; part only.
 6. 1983 — Education Statistics of New Zealand — Department of Education.
 7. Wagner G A — A Readability Assessment of Some Technical Correspondence Institute Assignments, New Zealand Council for Education Research, 1980.
 8. Renwich W L — Towards Continuing Education. Address to the Association of Teachers in Technical Institutes, May 1982.
- See also Callaghan C J — Effective Staff Development Needs a Resource Centre. Tutor 25 — Journal of TTU, November 1982.
9. Foks J — Big Brother, Education and Telematics. IDCE Bulletin, May 1984.

ANNEX 1

Course Index

A		D	
Accountancy	12	Dairy Farming	13
Advertising	19	Data Processing	14
Aeronautics Engineering	22	Deer Farming	13
Agricultural Pest Destruction	19	Dispensary Assistants	14
Agricultural Pesticides	19	Drainlaying	15
Aircraft Engineering (Avionics)	22	Draughting (Mech. Eng.)	22
Aircraft Engineering (Mechanical)	22	Draughting (Survey)	16
Aircraft Maintenance Engineering	22	Draughting (Town & Country Planning)	16
(Licences)	22	Draughting Technicians	16
Airline Pilots	22	Dyeing	18
Air Pollution Control	22		
Alum. Fabrication	15	E	
Amateur Radio	17	Electrical Appliance Servicing	16
Arable Farming	12	Electrical Engineering	16
Architectural Draughting	14	Electrical Fitting	16
Automotive Electrical	17	Electrical Restricted Cert.	16
Automotive Engineering	13	Electrical Study	16
Auto. Eng. (Heavy Equip.)	13	Electrical Technicians	16
Automotive Machining	13	Electrical Trade Courses	16
Automotive Technicians	13	Electronics	17
		Enginedrivers	18
		Export	21
B		F	
Banking	20	Farm Forestry	19
Biology	13	Farm Management	12
Blocklaying	15	Fire Engineering	16
Boatbuilding	15	Fitting & Welding	17
Boiler Attendants	18	Fitting, Turning and Mach.	17
Boilerhouse Practice	18	Food Hygiene	21
Boilermaking	17	Footwear Manufacture	18
Bookselling	14	Footwear Theory	18
Bricklaying	14		
Bridging & Structures Supervisors	16	G	
Building Inspectors	15	Garage Management	20
Building	14	Geology	13
		Golf Course Greenkeeping	19
C		H	
Cabinetmaking	14	Hairdressing	18
Carpentry	14	Health Administration Cert.	22
Chartered Institute of Transport	20	Health Engineering	22
Chemistry	13	Heating, Ventilating & Air	
Civil Engineering	16	Conditioning	22
CNG/LPG Conversions	13		
Coachbuilding	22		
Coachpainting	15		

Commerce	12	Horticulture	19
Commercial Pilots	22	Hotel & Catering Management	20
Computer Fundamentals	14	Hydatids Control	19
Computer Technology	17		
Control Systems	22		
I		Power & Plant	22
Industrial Electronics	17	Printing Administration	20
Industrial Engineering	20	Printing Machining	18
Industrial Instrumentation	17	Production Engineering	22
Industrial Pest Control	19	Public Health Admin.	22
Industrial Thermodynamics	22	Purchasing	21
Institute of Chartered Secretaries & Administrators	20	Q	
Instrument Rating (Pilots)	22	Quantative Methods	14
Insurance Institute of New Zealand	21	Quantity Surveying	15
		Quarrying	16
J		Quarry Managers Cert.	16
Jewellery	18		
Joinery	14	R	
Joinery Machinists	14	Radio	17
Justices of the Peace	12	Real Estate	20
		Refrigeration	17
K		Road Transport	22
Knitting	18	Roading Supervisors	16
L		S	
Land Surveying	21	Saw Doctoring	16
Legal Executives	12	Science	13
Life Assurance	21	Secretaries (Chartered)	20
Local Government Administration	12	Sheep Farming	12
		Sheetmetal Work	15
M		Signwriting	15
Management	19	Small Engines	18
Marine Engineering	18	Smithing	17
Maths	13	Soils & Fertilisers	13
Maths & Statistics	13	Statistics	13
Mechanical Engineering	21	Stock & Station Agents	12
Microprocessors	17	Supervision Certificate	20
Mining	16	Survey Draughting	16
Motor Trimming	22	Surveying	16
Motor Vehicle Salesmanship	21		
Moulding	21	T	
		Technical Teachers Cert.	14
N		Technicians Cert. (Civil)	16
National Certificate in Retailing	20	Technicians Cert. (Draughting)	16
N.Z. Certificate in Customs	20	Technicians Cert. (Electrical)	17
N.Z. Institute of Management	20	Technicians Cert. (Radio)	17
N.Z. Railways Fitters	21	Technicians Cert. (Survey)	16

Noxious Plants Officers	19	Telecommunications Engineering	17
Numerical Methods	13	Telegraph & Data Tech.	17
P		Telephone Technician	17
Painting & Decorating	15	Television	17
Panelbeating	22	Textiles	18
Patternmaking	21	Ticketwriting	15
Pig Husbandry	13	Timber Machining	21
Pilots Chemical Rating	19	Toolmaking	21
Plastering (Fibrous)	15	Town & Country Planning	
Plastering (Solid)	15	Draughting	16
Plastic Engineering	22	Town Planning	16
Plumbing & Gasfitting	15	Transport (Chartered Inst.)	20
Turf Culture	19	Tunnelling	16
Typography	18		
W			
Watchmaking	18		
Water Science	13		
Welding	17		
Wood Machining	14		
Works Supervisors Cert.	16		
Y			
Yarn Manufacture	18		



Supporting Paper II

OPEN HIGHER VOCATIONAL EDUCATION IN NEW ZEALAND*

General Review Of Open Higher Education

This paper is intended to take into account the **real** needs of developing countries and their resources available for open higher education. Vocational education and training are pressing needs, if the gap between the standards of living of the developed countries and developing countries is to be reduced.

We are members of the International Council for Distance Education (I.C.D.E.). Its Bulletin does not fully reflect the massive problems faced by developing countries. Instead, it concentrates on such matters as the use of electronic media, the cost effectiveness of which has not, in most cases, been thoroughly evaluated.

It is clear that distance (open) education — particularly at the higher level — will expand even more rapidly than the dramatic increase during the last few years. The so-called developed countries — particularly those which have recently entered the field — tend to rely on the latest electronically based technology, perhaps to cover up their lack of experience of distance education, and also because money is readily available. "However, an unsound educational structure cannot be improved merely by applying modern educational technologies. They merely paper over the cracks¹."

Baath² has put his finger on the pulse of Open Higher Education. He quotes Rumble and Keagan³ to indicate, "I am convinced, that this is a general playing down of the value of correspondence teaching and the use of print".

Baath nopes I.C.D.E. will get "a good representation also from the non-university people and if we manage to arrange favourable conditions for an open exchange of information, and for constructive discussion, I am convinced that we will all have much to gain". Our philosophy of higher distance education is akin to that of Baath.

Unfortunately, many developing countries cannot afford to emulate the Open University and its counterparts elsewhere. The increasing use of electronic technology in these institutes **may** prove to be more effective than more conventional distance education methods, but there is no doubt that costs to both governments and students have escalated. The Open University, for example, has had to accept financial restraints and student fees have increased considerably.

In countries, such as New Zealand, the demand for educational dollars is greater than the supply and we must select priorities for open higher education in both methods and subject matter.

At the risk of offending the Arts buffs, it is clear to me that priorities are needed, when educational finance is in short supply; increasing food production, for example, is a pressing need.

*Dr. E I Jones,

Deputy Principal, New Zealand Technical Correspondence Institute, New Zealand

That means vocational education and training must be stepped up.

I am convinced that developing countries should give a higher priority to vocational education. Open higher vocational education is a valuable means by which, in the case of TCI, subject ranging from skilled trades through technician to post-graduate level vocational education can be taught effectively.

What Is Open Higher Education?

In New Zealand, we have accepted that education should be open to all, regardless of financial status or location. Distance education has been, since well before World War 2, available for those who, for whatever reasons, cannot attend classes. In New Zealand, "higher" means any course at tertiary level — that is post-secondary school level.

A Brief History Of Distance Education In New Zealand

My country has been a pioneer of distance education which has been government funded from its beginning.

The Correspondence School was established in 1926 to ensure that children and young people living in rural areas received an equal standard of education to those in cities.

The Technical Correspondence Institute (TCI) was established in 1946, to ensure that ex-servicemen could enter vocations — mainly at skilled trades and sub-technical levels.

Massey University extra-mural studies department catered originally for teachers wishing to study for extra teaching qualifications, (now C.U.E.S.).

In all cases, because of the quality of courses, all have developed and grown in popularity. Student rolls have increased such that, for example, my Institute's roll has increased from 614 students in 1946 to 28 600 in 1984. From a staff of 8, it now has a total staff of 500 tutors and administration staff.

Reasons For The Development And Expansion Of Distance Education In New Zealand

- Successive Governments have taken the view that no matter where a student lives he/she is entitled to equal opportunities for education at all levels.
- This includes people whose jobs or personal circumstances do not allow them to attend face-to-face lectures or classes.
- Money has always been made available to ensure that first-class distance education courses are well-written, educationally sound and attractively presented.
- Some countries use many 'outside markers' and course writers who are not trained, not dedicated, and not well paid. We are staffed, in the main by full-time teachers or tutors.
- ± There is at TCI and the Correspondence School little use of staff having to teach a combination of part-time face-to-face, part-time distance, education teaching. This is an educational trap into which even some affluent countries have fallen.
- By sympathetic tuition from teachers or tutors, a one-to-one situation is created on a personal basis.
- Pass rates in externally set and marked examinations are as high as, or better than, the national average.
- (a) The Correspondence School does not charge fees.
- (b) Massey University and TCI fees, are by any standard in the world, minimal.

- The Correspondence School produces excellent radio programmes for its students.
- Massey uses seminars and area groups very effectively.
- The Correspondence School uses area peripatetic teachers to visit and coach its students.
- Students — certainly at TCI — can study at their own pace, commensurate with their ability and time available to them.
- New Zealand distance education establishments have not rushed in to use the latest technology without having it, in all its forms, evaluated. Does anyone else remember the fiasco of programmed learning?
- We are convinced that the written word is still a most powerful medium.
- We are not educating a rich élite. Thus, we do not insist "You must have your own computer, V.T.R. — even a telephone — before you enrol with us".

The Development Of NZTCI

As stated earlier, student enrolments have increased from 614 to 28 600, in 38 years, yet our human population has not increased dramatically.

In 1946, TCI (then the T.C. School) offered largely trade courses, but with low level technician basic subjects also — mathematics and physics. Twelve such courses⁴ were offered. There are now 940 subjects available⁵. In June 1982, 29 837 students had enrolled⁶.

Perhaps the largest single element of the growth of TCI's open higher vocational education has been, in common with our face-to-face colleagues, the development of technician courses. Seen as a bridge between the skilled 'trades' person and the technology oriented university graduate, technicians and courses related to their employment have been most successful. Annex 2 gives an outline of A.A.V.A. and some of its rules, strengths, and weaknesses.

This area of study has, if banking, tourism et al courses are considered as technician level, grown to such an extent that our open higher vocational courses now comprise about 65% of all enrolments.

A very important aspect is that if, say, an engineering technician student passes the final level external examination with high grades, after completing a few more subjects, that student can receive a credit of two years' study towards a 4 year university degree course — a powerful incentive.

A section of TCI's prospectus will, no doubt, indicate how the number of TCI's courses has increased, based on demand. (See Annex 1.)

It is noteworthy that UK is to start an Open College to cater for technicians. Indicative of the development of TCI and the quality of its courses are the requests for our course material (assignments) from other countries. We have supplied courses to Australian States, Singapore, and several other countries.

Developments And Changes Of Philosophy

Because of the increasing requirements for TCI to offer courses which required a measure of 'hands on' experience, our courses required an additional component. In co-operation with our face-to-face technical institutes and community colleges, and with assistance from our Labour Department and employers, those courses that require a 'hands on' content make it mandatory for students to attend a block course — from 1 week per subject to 18 weeks during the early stages of the course. The teaching of theory, reinforced by practical experience produces a well-rounded student/trainee.

New Zealanders have always been self reliant, with an emphasis on not just a 'higher education' piece of paper, but an ability to do the job yourself or to understand what others must be able to do. Even our university graduates are, in many disciplines, required to have proved that they have had suitable complementary practical training before they receive their degree.

Clearly, there is a limit to what can be taught at a distance. Hands-on experience cannot, of course, be replaced by video-taped training programmes. TCI does not claim to be able to do everything in the education-training fields.

We cannot teach, nor do we claim to teach, every skill to our students. We do claim that, in the main, they are educated and trained to a high standard by integrating theory and practical education and training.

Over the years since open higher vocational distance education has established itself — not as a second best option — quality controls on the final product have been exercised.

- In the majority of courses, no student may enrol with us unless actually employed in a particular job or occupation.
- No student can enrol unless it can be proved that he/she is either employed in, or expects to enter a particular job or occupation.

Obviously this rule restricts our enrolments which, if a 'free for all' situation was allowed, would increase our roll to more than 100 000 students.

The opportunity to study with TCI is thus restricted. The rules do, however, eliminate the 'paper only' theorists who can only pass examinations.

Unfortunately, now New Zealand's unemployment figures have risen, the rules exclude those who may otherwise prepare themselves better for employment opportunities that may arise for them in the future.

Policies And Present Methods Of Distance Vocational Education At NZTCI

The written and printed word are still our main educational media. Our study programmes are called assignments.

Assignments, especially our various English language courses, are supplemented with Audio Tapes. (A survey indicated that 96% of our students had access to audio recorder-players.)

We tried to complement our assignments with video tapes. However, we soon found that very few students had access to VTRs. Those few who did have access to them were not able to see and hear the tapes just before, or soon after, studying an assignment — an educational disaster. So, until it is possible for our students to have ready access — by either renting or purchasing VTRs, we are not making wide use of video tapes. I have mentioned earlier that my country is not interested in educating only those who can afford very high course fees, computers, and VTRs. A rich educated elite is not our goal. Neither do we expect students, as in the USA and Canada, for example, to get into debt to "finance themselves through college".

Because successive governments have subscribed to educational egalitarianism, our fees for an academic year, with three subjects are \$55 — about US\$25.

Our courses are developed from two main sources:

1. By developing into educational form externally drawn up syllabuses, or
2. By consultation with an employer group or industry training board to draw up a suitable syllabus.

Steps In Curriculum Development

A subject specialist is selected to write the assignment. This is a full-time tutor with suitable industrial/commercial and curriculum development experience.

The technical editor is selected to check the accuracy of the course material. A recent innovation is that, before our assignments are printed, an employer group or training board nominates an expert to edit them, and confirm the relevance and quality of subject content.

The Head of Department, after selecting the two people above, calls meetings with a subject (course) supervisor, the above and, where necessary, other expert writers and any other advisers he requires.

The syllabus is broken down into watertight modular topics (assignments), usually 10, and a content plan is drawn up and submitted to the Deputy Principal. He discusses the objectives with the subjects specialist and if satisfactory, approves the content plan.

Once having obtained clearance on objectives and content, the subject specialist (author) writes the first draft of the assignment.

Self-checking practice exercises are included in each assignment where key learning points are made. Summaries are also used to highlight important "points to remember".

Test question for the student are provided at the end of the assignment.

Illustrations to be used are discussed with an Art Editor. (Artists are employed to produce illustrations.) If Audio-Visual material is required, an audi-visual producer is consulted on the script emphasis required and the subject specialist joins the producer to make the A-V aid.

All draft assignments are Technically edited then checked for a simple and logical development of the topic. Following approval, English is checked for correctness and simplicity and educational merit by presentation editors, who also check the layout.

Assignments are the typed, illustrated and printed.

When the student receives his assignment, he reads it, completes the exercises, and then returns the completed test paper to his tutor for assessment and comment.

After students send in their work it is assessed, commented on and returned to the student with the next assignment and specimen answers for the marked assignment.

Evaluation And Research

Until recently, the sole evaluation criteria used were complaints by students or external examination pass rates.

These were thought, during the last 3 years, to be an insufficient guide to the real success or weaknesses of our course programmes.

First, we called in the New Zealand Council for Educational Research to evaluate the reading levels of our courses.⁷

The results shook our complacency.

The readability research, which we initiated, has now been taken up by Massey University.

A more recent NZCER - TCI joint research programme has revealed some thought-provoking problems related to certain of our management courses. Before the final results of the research are completed, we realise we must think again — especially when the age of student is in the 20 to 45 age range.

External Standards Met — Syllabuses And Examinations

TCI has very little say in the drafting of externally examined syllabuses. Even if they are out of date or have out of date or irrelevant material included, we must still write our courses around them. Nevertheless, despite the frustrations which our tutors face regarding syllabus content, most of our students are pleased with what we offer.

It must be remembered that, unlike the face-to-face situation, all of our course material is subject to the critical scrutiny not only of our students, but also of their parents, friends, and employers. These checks are invaluable to us, because the feedback, though not always complimentary, keeps us on our toes and indicates to our tutors where improvements in presentation and subject material must be made.

As mentioned earlier, our externally set and marked examinations indicate that we are at least as good as our face-to-face counterparts.

Limitations Of Present Methods

We have perceived limitations in our courses. We cannot offer as much 'hands on' experience to students as we would like.

Although we attempt to recruit tutors who can be trained to be expert educational course writers, this is not always possible. Even though we use technical editors to check the accuracy and relevance of the subject matter, and presentation editors to check and improve the layout and presentation, they often still contain irrelevant or outdated material.

Some of our tutors produce factually correct, but boring, course materials. Others are, frankly, longwinded.

Not all of our assignments are truly self-contained modules, and some are not educationally well thought out.

By the same token, however, some of our tutors do write superbly clear, educationally sound, and highly interesting assignments.

We are, perhaps, overly dictated to by externally devised curricula (syllabuses). To be fair, at least these are nationally prescribed syllabuses, and a national standard is maintained. Any student who is successful has a nationally recognised qualification.

We do not have liaison tutors who, like the Correspondence School, can assist, on a peripatetic basis, individual students.

For certain courses there are no pre-entry qualifications or, if there are, employers can still override prerequisites. To illustrate this point, we enrolled, on an employer's advice, a student for Horticulture who could not read! Yet the individual would be expected to use lethal pesticides.

Readability is still a serious problem, as are students' reading levels.

Tutor Training

We are hoping, soon, to offer 3 months' tutor training to all tutors — commencing with new entrants — see Annex 3. This, we hope, will improve the educational quality of our assignments.

This is a high priority for TCI because, although we have been giving tutor training in the past, we have not been happy with the length of time allocated, nor with the minimum emphasis on training for teachers in distance education.

Having recognised a severe weakness in our tutor training methods, we shall try out the programme mentioned, then have it evaluated by an external organisation — NZCER or Victoria University's education faculty.

Our Director-General of Education, W.L. Renwick⁸, drew the attention of our tutors' union (ATTI) to the general weakness in tutor training and resource development, in 1982.

Restrictions On Enrolments

Except for the employment related restrictions mentioned earlier, there has been no definitive restriction on enrolments in TCI. However, because tutorial and administration staff have been subjected to staff ceilings, we have been faced with either restricting enrolments or taking longer to return students' test papers without reducing our standards of tuition. We have chosen the latter course.

However, a major weakness of TCI's education method is that, when students have a problem with a particular aspect or principle, by the time they send in their test papers and have them returned and their mistakes pointed out, 2 or 3 weeks often passes. Students can phone in, but a problem with, say, integral calculus, is difficult to explain satisfactorily over the phone. In this respect, restrictions on staff mean, not only that students' educational development is affected, but also that the quality of our service to the students is undermined.

The Lack Of An Educational Strategy — Its Effects

It is unfortunate that within our Department of Education — and I suspect it is the case in other countries — there is nobody in senior post who has been involved with open higher vocational education.

Moreover, it has been made clear to those of us who are in the distance open higher vocational scene, that we are considered as the second best and consequently have been relegated to the reserves. Statistics related to the growth of distance open vocational education make nonsense of these views.

What are the options, best to spend a New Zealand vocational education dollar? We are, in all New Zealand educational circles, being subjected to financial constraints, — understandable, because our economy is not as buoyant as during the 60's.

There is, certainly in the higher vocational education sense, an almost total lack of strategy, as opposed to expedient tactics.

It is suggested that the failure rate in face-to-face institutes could be reduced considerably if more students were required to undertake a preliminary open (distance) education course before attending a face-to-face institute — at considerable expense to our nation.

The suggestion continues that those not willing to undertake the discipline of distance vocational programmes would change their minds before embarking on a vocational course for which they were not suited.

Benefits To Developing Nations of Open Higher Distance Education

Given reasonable student numbers, open higher distance vocational education is up to 30% cheaper than the face-to-face situation. Even so, the initial costs of setting up a distance education course are considerable. It is conceded that, to provide a worthwhile distance vocational course, student numbers should justify the large initial costs.

If there is a priority in national economy terms, small-number courses should be offered at a regional, or national centre, on a sandwich or short block course basis.

To obtain the most cost-effective use of money available for higher education, developing countries should compare, carefully, the advantages of open higher distance vocational education versus face-to-face teaching. When, as is the case, developing

countries have very large numbers of people requiring vocational education and training, the 'open' distance method is, within limits described earlier, superior, and

- More cost and educationally effective,
- More readily checked for standards and quality,
- Able to educate a very large number of people for vocations quickly and effectively. Changes in technology can be communicated much more readily than by retraining teachers (tutors) in main centres.

Through distance education teachers themselves can be, if not too far out of date, upgraded by studying for open higher vocational education qualifications. Indeed, this method is much more cost effective, providing course material is kept up-to-date, than any other educational method.

Above all, cherish your open higher (distance) education teachers and convince them — by encouraging them — that their expertise is worthwhile and is contributing to your educational and economic goals.

Develop a national higher vocational education system, based on a planned strategy to make the best use of your financial resources. Never underestimate the value, as is the case in higher education circles in New Zealand, of open distance vocational education.

Specify what you mean by Higher Education. It does not mean, I believe, copying such as the Open University. Develop your own methods. Costs, of course, have escalated and the UK Government has acted to restrain costs.

Costs Involved And The Effectiveness Of The Up-To-Date Sophisticated Technologies.

First, most developing countries cannot afford to purchase, so as to benefit a wide cross-section of their peoples the latest and sophisticated technology for educational purposes.

Secondly, they are often merely keeping up with the Jones's by using what they cannot afford to offer, on a wide basis, to all of the members of their educational communities.

No developed country has yet been able to fully determine the educational benefits by evaluating the new technologies before willy-nilly adopting them.

Let us examine them, within what is possible and reasonable for cost-benefit educational effectiveness.

Television

Many developing countries now have television available, although **not every student** has access to a T.V. set.

Nevertheless, T.V. has a place — provided it is used to **complement** other educational material.

- Programmes should be produced with appeal, based on sound educational psychology, and suited to the particular education level of the viewers.
- Reception must be good. Satellites in widely dispersed countries such as Indonesia are expensive but invaluable.

Radio

This medium is most effective for language courses because it is readily available to students and is relatively inexpensive. Ideally, students should be able to record the programmes.

Our Correspondence School has many years of expertise in this medium.

Telephone Network (E.T.N.)

This system is good in affluent developed countries, but is costly on staff time. If the user pays toll calls in developing countries, costs would prohibit students using it.

VTR's

Probably the most significant development in distance education, VTRs linked with TV, will prove their educational value. Play-back facility is educationally sound. However, how many developing countries students can afford VTRs?

Teletext — See my comments on TV and VTRs.

Telematics

These may prove to be a useful educational tool for affluent developing countries whose students can afford "a 64K computer for about A\$800 . . ."9.

The above review is not exhaustive. It is intended to focus attention on criteria such as

- The cost-educational effectiveness of the new technologies. None has been fully evaluated as yet. The claim that TV in the classroom would replace teachers appears to have faded away.
- How many developing countries can afford new technology unless only an élite group is to be educated?
- The educational philosophy of any country. New Zealand has, since its earliest days, concentrated on a sound education for all, with fees, if charged, being minimal.

Within the limitations I have described above, correspondence education at a distance is, still, fundamentally sound — even for higher vocational education.

The Future Of Open Higher Distance Education

All forms of distance education will be more important in the future. The increasing importance of pre-vocational skills and education has been recognised in certain developing countries (Fiji and Indonesia are two examples).

How can these goals be achieved? How can the developing countries, within severe financial constraints, achieve a higher standard of practical technology? More basically, can they afford not to?

- Teacher/tutor training methods must be improved.
- One method of improving training is to use part distance, part 'on the job' training for teachers of vocational subjects — This will reduce training costs and allow a shorter training time.
- Teachers must produce resource material for themselves and their students. Standards of teaching will increase at less cost. Distance educators can produce this resource material in the form of teachers notes, students notes, simple visual aids, tests, evaluation techniques, and so on. TV, radio, and the use of satellites can make an impact by complementing what is taught.
- Developing countries will need to make available a central source to write and produce — even print — correspondence courses.
- A network of teachers/tutors will be required in regional centres to distribute material, mark, and give tuition to their students.

- In remoter regions, vocational students will need to come in for practical training — after they have successfully completed a correspondence course. They will receive ~~some~~ revision of theory then be instructed and tested on all aspects of their course — theory and practical. National, external examinations and practical tests must be monitored.
- Those who are to write and produce open higher vocational education training courses must themselves be trained. Restraining — updating teachers/tutors educational skills can best be implemented by correspondence — block course — methods.

Open higher vocational education is an essential ingredient of any developing country's economic and social goals!

You will not that I have left out use of some of the 'new technologies'. By all means developing countries should try them out on a pilot basis, then stringently evaluate them on a cost-educational benefit basis. Fundamentally, it is important to equate educational opportunity with available financial resources.

Summary

I have placed the most emphasis on open higher education:

- On usefulness for developing countries
- Open vocational education, and complementary training
- Cost-effectiveness relative to those whose 'educational dollar' is not too readily available
- Some pragmatic thoughts about the 'new technologies'
- On the fact that we, in New Zealand, are speaking not as "instant experts", but with several decades of experience behind us in the field of higher vocational distance education.
- On open higher education being open to all and not being restricted only to those students who can afford to pay for high technology experiments.

I am convinced that the affluent developed countries will continue to try to develop a respectability for open higher education by introducing more and more technology-based courses. These aids cannot, of course, replace educational expertise!

Nevertheless, provided money is available and, as important, expertise in distance education techniques is acquired, open higher education will be more oriented towards learning in your own home. The 'friendly' computer **may** replace the rapport built up between sympathetic tutors and their students of distance education.

Nevertheless, with all the faults of open higher vocational distance education at TCI as have been described, we still prefer, with logical, reasonable costs, our correspondence course style — until proven application of the 'new technologies' is thoroughly evaluated.

Both my Principal and myself, on behalf of TCI, should be pleased to continue assistance to developing countries — better to produce cost-educational effective methods of distance education.

We have, even if only through our mistakes, learned much of value, during 38 years, that we would be glad to share with our less well-endowed developing country friends.

Appendix 1

This appendix outlines the sort of content that would be found in typical courses addressing the subjects listed in Table 1.

† Computer Awareness/Literacy

This would be a short course, say 30-50 hours, which aims to explain elementary computing concepts and terminology. It might cover a short history of computing, introductions to hardware and software giving brief hands-on experience with an elementary software package or programming language, e.g. BASIC. For many students it might be seen as a demystification process.

Data Processing

This would be expected to cover the main areas of knowledge and skill required in commercial data processing including systems analysis and design, elements of applications programming including a knowledge of COBOL, structured methods and file processing techniques.

Information Systems

This is likely to overlap with the Data Processing curriculum, but to include greater emphasis on management information systems and database techniques.

Computer Science

This would typically be more theoretical and less skills oriented, addressing areas such as the theory of algorithms, computer architecture and system software.

Systems Software

Probably a software engineering approach to the construction of major pieces of systems software such as operating systems, database management systems, data communications packages and compilers.

† Programming

Characteristically this would be a relatively short course, say 100 hours, teaching structured programming techniques through a specific language like Pascal or COBOL. The aim would be to train students to a stage where they could write an adequately structured program of several hundred lines.

† Typically computer awareness/literacy and programming courses would not be seen as tertiary level courses.

Annex 2

Note:

The Technicians Certification Authority has been renamed the Authority for Advanced Vocational Awards.

Over a period between 1945 and 1956 it had become evident in New Zealand that, in common with many other countries, there was a need for a group of people to fill the gap between the skilled craftsman (tradesman) and the technologist (university graduate).

The complexities of a trend towards increased local manufacture of consumer goods; the difficulties experienced by skilled tradesmen in linking up with the technologist's designs and philosophy; the misuse of university graduates in jobs underemploying their talents; the general shortage of both groups — these and many similar causes led to the requirement for the technician.

The Technicians Certification Authority (TCA) was established under the Technicians Certification Act in 1958.

Its functions are:

- To prescribe courses and syllabuses; and to conduct examinations for technicians, and to appoint examiners, moderators, supervisors, and assessors for the purposes of those examinations;
- To prescribe conditions for entry to such courses and to give exemptions where it considers it appropriate;
- To approve schools as suitable to conduct such courses;
- To grant or issue, either independently or in conjunction with any other examining body diplomas or certificates to any person in recognition of his having successfully completed a course prescribed under this Act.

For each area of study there is an Executive Committee consisting of representatives of the universities, professional institutions, e.g., The New Zealand Institute of Architects, the State Services, e.g., Ministry of Works and Development, Employers, the teaching institutions for technicians (technical institutes) and the Department of Education.

One representative of each Executive Committee is on the Authority Committee. The composition of the Authority, in 1975, was as given below. The members of the Authority are responsible for accepting new courses, prescribing the rules for all courses, and governing the standards for courses for technicians.

Chairman

Appointed by Minister of Education

Department of Education

Director of Continuing Education. Appointed by Minister of Education,
Department of Education

Assistant Director of Continuing Education. Appointed by Minister of Education,
Technical Institutes Association of New Zealand

Principal, Central Institute of Technology
Technical Institutes Association of New Zealand

Principal, Manakau Technical Institute

Vice Chancellor's Committee

Professor of Chemistry, University of Auckland
Representing Executive Committee for Engineering and Draughting
New Zealand Institute of Draughtsmen

- Representing Executive Committee for Engineering and Draughting
New Zealand Institution of Engineers
- Representing Executive Committee for Building
New Zealand Master Builders Federation
- Representing Executive Committee for Building
New Zealand Institute of Architects
- Representing Executive Committee for Science
New Zealand Institute of Chemistry
- Representing Executive Committee for Science
New Zealand Institute of Medical Laboratory Technology Inc.
- Representing Executive Committee for Commerce
State Services Commission
- Representing Executive Committee for Commerce
Associated Chambers of Commerce

Each Executive Committee has the task of:

- (a) deciding on course content — syllabus and curriculum. Outsiders can be co-opted to assist the development or revision of a syllabus
- (b) putting together notes for the guidance of teachers, including any experimental work requirement, suitable reference books, length of time allocated to each topic
- (c) whether any potential student is employed as a trainee technician. An important point is that the TCA will not accept as a student any person who, by the end of the third year (stage) level of a five year course, is not employed in the field of industry and/or commerce applicable to his study option. An example will illustrate this point.

A young man wishes to study for a New Zealand Certificate in Mechanical Engineering (NZCE). By the end of the third year study level he must be employed at least as a trainee mechanical engineering technician.

Moreover, before he is finally awarded his NZCE he must have had 3 years' experience as a technician (this includes training time).

- (d) appointing examiners and moderators for internally and externally marked and assessed examinations
- (e) recommending to the Authority final examination pass percentages.

The New Zealand Certificate Structure

The higher technician courses are of 5 years' duration for the student with no study exemptions. In each year of the course he must obtain a coursemark from the institute where is studying.

This coursemark has within it some or all of the following:

- (a) satisfactory attendance (usually 75% minimum)
- (b) a satisfactory home assignment mark
- (c) a satisfactory laboratory course mark — his "lab book" must be available to TCA on demand
- (d) a satisfactory mark for written tests undertaken during the course

Exemptions — are given for those with School Certificate (Year 1 exemptions) and University Entrance (Year 2 exemptions) and some trade and university study passes.

Thus a young person with suitable exemptions resulting from acceptable University Entrance Examinations may be exempted from almost all of the first two years (stages) of study (English is never exempted).

Those with considerable industrial experience may be exempted certain, restricted subjects. An example would be, say, a 28 year old draughtsman working in civil engineering. He could be exempted Engineering Drawing at Year 2 level.

Technical institutes approved to do so by TCA can internally examine all subjects for Years 1 and 2 and their passes are moderated by TCA. They can use the same procedure for Year 4 subjects, but before examination papers and pass marks are accepted they are moderated by TCA (the Executive Committee appoints a moderator).

Years 3 and 5 have externally set and marked examinations, i.e., set and marked by TCA examiners.

Note each Stage is equivalent to a year's study.

A typical New Zealand Certificate course structure is given herewith.

New Zealand Certificate in Science PARAMEDICAL

1. SUBJECTS OF THE FIRST TWO STAGES SEVEN subjects required

COMPULSORY

English

*Biology I and *II

*Chemistry I and *II

Mathematics I

OPTIONAL

(1 required)

Mathematics II

*Physics I and *II

Drawing I

*Mechanics I

2. SUBJECTS OF STAGES III, IV and V. No subject may be presented for examination until any prerequisites stipulated have been passed.

	SUBJECTS	PREREQUISITES
<i>Stage III</i>	+ *Medical Biology	*Biology II
	+ *Chemistry III	*Chemistry II
	and ONE of	
	+ *Laboratory Technology (Medical)	Mathematics I
	*Physics III A	*Physics II
	*Physics III B	*Physics II
<i>Stage IV</i>	TWO of	
	+ *Biochemistry I	*Chemistry III
	+ *Medical Laboratory Practice I	*Medical Biology
		*Chemistry III *Physics II
	*Chemistry IV (A and B)	Mathematics II
		*Medical Biology and either
	*Human Physiology I (A and B)	*Physics III A or Physics III B
	*Instrumentation	*Physics II
	*Microbiology I	
<i>Stage V</i>		GROUP A
	+ *Medical Laboratory Practice 11A	*Medical Laboratory Practice I
	+ *Medical Laboratory Practice 11B	
	+ *Medical Laboratory Practice 11C	*Biochemistry I
	+ *Medical Laboratory Practice 11D	
		GROUP B
	*Biochemistry II	
	*Medical Laboratory Practice 11C	*Biochemistry I and
	(Chemical Pathology) Written and practical	*Chemistry IV A *IV B

GROUP C

*Human Physiology 11A

*Human Physiology 11B

*Human Physiology 11C

*Human Physiology 11D

*Human Physiology 1A, *1B

and *Instrumentation

NOTE: Medical Laboratory Technology trainees are required to take the subjects marked + and Group A of the Fifth stage. They must also register with the Medical Laboratory Technologists Board which requires appropriate work experience in a recognised pathology laboratory.

3. Subjects marked * include a practical laboratory or field requirement.
4. For EXEMPTIONS for subjects of the first three stages see page .
5. Further details relating to the examination of Stages III, IV and V subjects of this certificate are given on pages and
6. Students who are taking the Medical Laboratory Practice option (Group A) should note that the Medical Technologists Board has compiled in detail suitable work requirements which should be completed by every student.

The Course: Their Relevance to Customers

The first higher technician courses were mainly in the engineering field — civil, electrical, mechanical production and telecommunications engineering and science chemistry, biology and physics.

The main sponsors initially were government departments — the Department of Scientific and Industrial Research (science options), Ministry of Works and Development (civil and mechanical options), New Zealand Electricity Department (electrical options), New Zealand Departments of Civil Aviation and Broadcasting (electronics and telecommunications) and a small number of private companies (production).

Thus the course requirements and syllabi tended to be oriented towards the education requirements of government departments. Similarly, the Authority tended to be largely representative of the government departments, the universities, such professional societies as the New Zealand Institution of Engineers and the Education Department.

Later, building, commerce, paramedical and similar groups requested that courses be set up for their technicians.

Private industry and commerce were late to take advantage of the technician courses offered and the effects of their action will be considered later.

The TCA now offers 16 major options for higher technicians in engineering, surveying, draughting, science, building, commerce, statistics, data processing, law, town planning, garage management, automotive, radio, telegraph and telephone, electrical, forest ranger and hospital work. (There are many more options now available — 1984.)

Within each option there are possibilities for a wide range of industry and commerce needs to be accommodated — see the paramedical option for a typical, flexible range of courses within an option.

Study Progression

It can be seen that a student can leave secondary school and with the right exemptions he can reduce a 5 year course to 2½ to 3½ years of study.

Equally a university student who drops out can, providing he has taken acceptable subjects (acceptable to TCA) be exempt up to and including year (Stage) 3 subjects.

Few skilled tradesmen obtain other than one or two exemptions should they wish to upgrade their education and status.

A student with a pass at Year 5 level *acceptable to a university can, for engineering, be exempt two years of a four year engineering degree. (*Extra subjects are now required.)

Strengths and Weaknesses of the New Zealand Certificate Courses

1. A major strength is that a technician who has started with few exemptions will have a good practical knowledge — gained by working and studying concurrently — of his field of endeavour.

Thus, such an individual is able to act as a valuable bridging link between the skilled worker and the technologist. The best technicians, in this regard, are those who have studied part-time (usually day release nowadays) and been working the rest of the week.

2. A major weakness is that TCA has been pressurised into accepting full-time courses at technical institutes which enable a young person to leave secondary school and with a year full-time study clear up all subjects for Year 3 and part of Year 4 before having any experience of the field of his choice.

Because such people are not necessarily sure that, say, production engineering is what they want to be in as a job, many square pegs for round holes are being produced. Employers, particularly private employers, are reluctant to employ these young people.

3. TCA is, see earlier comments, still largely dominated by the government departments who were its earliest customers. With the advent of Training Boards to look at the needs of their sectors of the work force, there is some disenchantment by private employers that their education requirements seem to take second place to different government department requirements.

The professional institutions, too, are considered to send often as representatives those who will safeguard the interests of their members rather than looking totally objectively at the needs of industry and commerce.

4. Because it is possible for students in certain options to proceed to university there is, still, perhaps, too much thought to constructing syllabi and curricula that maintain this progression even though only 10% of all successful NZ Certificate students take advantage of it. Many courses are considered to be too academic as a result.
5. External examinations do ensure national standards are maintained. They do not allow for the local, and sometimes, different requirements of government versus private industry of private industry in a farming area versus private industry in an industrial area to be met.

Perhaps internal assessment for all years of the courses could be undertaken with rigorous moderation procedures adopted to maintain standards.

6. Syllabus and curriculum committees are not considered, particularly by private industry, to be sufficiently representative. It is true that syllabi are circulated for comment, but the main voices considered are those of government departments and the technical institutes.
7. TCA is very moderately funded and this is perhaps the main factor giving rise to criticisms of courses which have proved to be invaluable to New Zealand's further industrial and commercial development.
8. The major strength of New Zealand Certificate courses is the insistence on working in the job for which a person is studying. Where, as described earlier, this rule has not been enforced due to giving way to pressure from educationalists, or due to lack of funds to police the rule not only the technicians themselves but New Zealand has suffered.

Developing countries which ignore the need for concurrent study and practical work do so at the risk of producing rather academically oriented technicians.

Appendix 3

A Distance Education Training Course For TCI Tutors

Contents

A Distance Education Course for TCI Tutors

Course Aims

Course Description

The Working Party Report

Appendix 1 The Basic Skills Course

Appendix 2 The Developmental Modules

Appendix 3 The Distance Education Projects

A Distance Education Course For TCI Tutors

The development of any training course for tutors at TCI must be seen as part of a more comprehensive staff development programme. Our staff training tutors, with support from selected tutors with specialist skills and experience in distance education, are preparing instructional modules on various aspects of distance education

The course will consist of a series of modules — a module being defined as a self-contained instructional package based on one topic. Each module is divided into a set of units, each unit dealing with a specific aspect of the module topic. A feature of this modular design is that it can be used flexible:

- Modules can be studied in sequence as part of a structured course. This is how new tutors will be trained.
- Modules can be studied singly, or in groups, by single tutors or small groups of tutors, as part of in-service training.
- Single modules or single units can be used as readings for seminars, workshops, and other forms of tutor refresher courses.

Each module will contain a brief introductory booklet outlining the content of the module, its teaching structure, its learning objectives, and how to study the module.

A study guide will be the central part of a unit. A study guide will consist of:

1. The learning objectives for the unit,
2. An outline of what the unit is about,
3. One or more readings or a tape to listen to,
4. The teaching material on the topic of the unit,

5. Self-testing exercises, and
6. A written assignment.

Each tutor will be expected to work through the unit largely on his own, but coached by the training staff or a specialist tutor whenever he needs it. In addition to the study guide work, each module will have an initial briefing session, each unit will include group discussion, and one-to-one tutor support will be available from the training staff and specialist tutors.

In preparing this course, we are choosing appropriate readings and other suitable materials such as examples from existing TCI assignments. These will enhance the credibility and standing of the course as well as making savings in writing and production time, and costs to our taxpayers.

The course will not be run entirely by specialist tutor training staff. It is intended to make use of the talents of existing tutors who have proven experience and are able practitioners of our distance mode of education. Being taught and coached by their peers will again improve the credibility and standing of the course with tutors. It will reinforce the essential day-to-day training that new tutors get from their colleagues on the job.

Course Aims

The aims of the course planned for tutors are as follows:

1. To give tutors, as soon as possible, training in educational principles and in teaching techniques.
2. To help tutors make the change from being vocational practitioners to being vocational educators.
3. To encourage tutors to develop an attitude to our courses and students which will give them a clearer picture of their role as tutors.
4. To enable tutors to appreciate that distance education is a very effective form of instruction.

Course Description

Certain skills are all important such that every tutor must be given the chance to develop them. We shall cover these skills in a basic skills course that all new tutors will undertake.

Other skills are not needed by all tutors equally. For example, tutors solely marking students' scripts need different skills from those tutors involved with assignment writing. While all tutors need a knowledge of the basics, they must be allowed to develop those skills, to a certain extent, in the direction of their choice whilst conforming to the needs of TCI. Tutors, like any other group, differ widely in their experience and ability. Therefore, after the basic skills course, we shall have available a series of modules from which a tutor will be given tuition, to suit TCI's, and his individual needs.

The course is based on a total study-time allowance of 12 weeks (400 hours), to be shared between TCI and the Wellington Regional Tutor Training Centre. A 3-stage training course is envisaged.

1. Basic Skills (5 weeks)

See Appendix 4. This programme will consist of four compulsory modules:

- | | |
|--|------------|
| — The System of Distance Education | — 40 hours |
| — Two-way Communication in Distance Education | — 40 hours |
| — Objectives and Testing in Distance Education | — 28 hours |
| — Writing a Teaching Unit | — 54 hours |

The programme will take 162 hours. Tutors are to complete this programme in their first year. Satisfactory completion *may* become a prerequisite for appointment to the permanent staff. Much of what a tutor has to learn is learned on the job — for example, student enrolments, student records, production procedures, script handling systems, script marking, writing, and conditions of employment. **No system of tutor training can, by itself, train tutors thoroughly.** The help of fellow tutors in their day-to-day work is a form of continuous on-the-job training, particularly at TCI, where tutors are located in work-related groups.

The training course must be the real life situation and we are doing this by having much of this course prepared and managed by our proven superior tutors.

2. Developmental Skills (up to 5 weeks)

See Appendix 5. Training is designed to allow tutors to select modules which develop and extend the skills taught on the basic skills course. Tutors would normally do this stage in their second year. If a tutor is found to have difficulty or weakness in aspects of the basic skills course, he can go on to modules that go more fully into these aspects — for example, the fundamentals of clear writing. In the second stage, tutors choose with advice 3 - 6 modules from a range of about 10 offered. Most of the modules need about 40 hours of study time. All are closely relevant to tutor development at TCI, and there is a pool of experienced, articulate people to teach the modules and revise and update them as required.

3. Distance Education Project or Special Methods (2 weeks)

See Appendix 6. We are sure that tutors will gain much by completing a project on a distance education topic in their third year.

The Working Party Report

The training scheme for new tutors accurately reflects the principles of training as required for all aspects of vocational education.

1. Have a clear and logical progression in training,
2. Match training with tutor work needs,
3. Be flexible and capable of adaptation and change,
4. Give priority where applicable and desirable to individual choice,
5. Give tutors access to a wide range of specialist staff, and
6. Lead on to further professional development.

Ideally, training in theory and practice should accompany, not precede, a tutor's practical experience on the job. Training should not be so compressed that it loses touch with the reality of teaching at a distance. For example, to develop as a competent writer of distance education teaching material, a tutor must progress through the theory and practice of writing, evaluating his printed work by means of the reactions and success of his students, and amending and revising his material to improve its teaching quality. In most cases this developmental process requires at least 3 years.

Our training staff have access to 400 experienced tutors, who have many and diverse skills in our mode of education — advising students, counselling, planning, researching, writing, editing, use of illustrations, typographic layout, and other skills peculiar to correspondence teaching. Tutors on a TCI course will have access to this expertise.

By the nature of correspondence work, tutors at TCI can be more easily released than tutors at other TIs to do training work. Therefore, we shall hold courses at times to suit

groups of tutors and TCI's work patterns. We can also schedule these courses to give each tutor aspects of training when he/she needs it.

Although many of the principles of teaching and learning and many of the specific educational topics are the same at TCI and other TIs, the TCI course differs in *how these principles are applied and in the different emphasis given to them.*

We at TCI are very much aware of our tutors' individual needs.

We must develop their skills to the full, better to offer courses to our many students — our most important consideration.

Appendix 4

Outline of Modules and Units in the Basic Skills Programme

STAGE 1 (Compulsory 162 hours)

Module 1 Units 1 What is Distance Education?

- 2 Correspondence Teaching
- 3 Teaching and Learning
- 4 Organisation and Administration in Distance Education

Module 2 Two-way Communication in Distance Education (40 hours)

Units 1 The Function of Two-way Communication

- 2 Counselling Students at a Distance
- 3 Guiding Student Learning through Written
- 4 Comments on Student Scripts

Module 3 Objectives and Testing (28 hours)

Units 1 Preparation of Instructional Objectives

- 2 Preparing Effective Test Questions
- 3 Preparation for Assessment

Module 4 Writing a Teaching Unit (54 hours)

Units 1 Training for Writing

- 2 Writing Clearly and Simple
- 3 Telling is not Teaching — factual information is not enough
- 4 Getting it Together — pre-planning
- 5 Getting it Down — in as few words as possible
- 6 Testing Procedures — including practice exercises
- 7 Evaluation — of students' responses and the assignment

Appendix 5

Outline of Module Contents of the Developmental Programme

STAGE 2 (Electives — up to 170 hours)

Tutors after counselling, will be guided to select a number of these modules — up to a maximum of 170 hours' study time. These electives must be completed before the end of a tutor's second year of employment. Module titles and an outline of their content are as follows.

Module 5 Teaching and Learning in Distance Education

This Module will benefit all tutors. It will examine the ways information can be structured for easy learning. It will also present ways for teaching concepts, principles, problem solving, and practical skills, at a distance. It will examine the ways adults learn, the function of memory, understanding of the learning process and correspondence tutoring, and the design of course materials.

Module 6 The Presentation of Teaching Materials (40 hours)

This Module will suit all tutors who wish to improve the teaching quality and impact of print materials. Some of the topics covered (see planning, sheet 6) will be

1. Improving the legibility of printed extracts by applying typographic principles;
2. Making more effective use of graphs, charts, and tables;
3. Ways to represent teaching content visually;
4. How to represent an illustrative idea to the illustrator;
5. Making the maximum use of existing illustrations;
6. The layout and zizing of ellustrations;
7. Ways of linking illustrations to the text.

Module 7 Testing and Assessment (40 hours)

This Module will benefit all tutors. It will build on the foundation of Module 3 and look closely at the construction of test papers and objective test items (especially multiple choice). See Planning, sheet 7.

Module 8 Fundamentals of Clear Writing (20 hours)

This Module is designed to benefit authors who have specific weaknesses in writing, and who need extra training.

Module 9 Curriculum Development in Vocational Education (20 hours)

This Module will benefit tutors who will be expected to write course materials and/or who will become involved in syllabus development programmes. The principles of syllabus construction (setting objectives, selecting content, allocating study time, etc.) will be reviewed. Syllabus construction procedures of AAVA, TCB, and others would be briefly examined, and the role of the VPRU would be dealt with. Finally, the module will present guidelines to tutors on how to interpret existing syllabuses.

Module 10 Course Development in Distance Education (40 hours)

This Module is designed for those tutors involved in the development of new and/or revised courses.

It will examine

1. Alternative course development procedures,
2. Aspects of course design (when to use self-contained units, readings with study guides, remedial modules, optional units, audio tapes, and so on),
3. The construction of a course plan.

Module 11 Block Course Teaching (40 hours)

This Module is designed for TCI tutors who teach at block courses once or twice a year. They need training in some aspects of classroom management.

This Module covers

1. Lesson preparation based on five basic teaching principles about stating objectives, content structure, presentation, evaluation and learning;

2. Ways to motivate students;
3. The use of questions by tutors and how to handle students' questions and answers in the classroom;
4. The use of teaching aids, e.g. OHP, chalkboard, and so on; and
5. Points on speaking (delivery), e.g. use of notes, voice, manner, etc.

Other modules will be developed as required. Others being considered are:

Module 12 Elements of Distance Education (40 hours)

This Module would extend and develop several distance education themes that were touched on in Modules 1 and 2. It would examine areas such as communication with students, student support, frequency of response time, and computers in distance education.

Module 13 Course Evaluation in Distance Education (40 hours)

Module 14 Research and Resource Collection (20 hours)

Appendix 6

Outline of the Projects (60 hours)

A number of suggested projects are listed below. These would be completed in a tutor's third year of employment.

1. Write a part of a assignment
2. Set an exam paper
3. Evaluate a course
4. Provide an audio tape
5. Write an in-depth paper on
 - pacing
 - developing audio courses
 - use of electronic media
 - student problems
 - test papers and specimen answers
 - statistical analysis of exam results
 - research based on a questionnaire
 - cost effectiveness
 - laboratory work
 - counselling of students
 - student support



Supporting Paper III

DEVELOPING UNIVERSITY SUPPORT FOR THE DIVERSE NEEDS OF STUDENTS IN OPEN COLLEGES AND UNIVERSITIES: USA*

Many U.S. community colleges and universities are currently attempting to admit students who do not meet the academic requirements of conventional institutions of higher education. As these students continue to enroll in the nation's "open" campuses, there is growing concern as to whether these institutions are adequately prepared to meet the particular needs of, and also to derive the optimum benefit from, this increasing population of students. The concern appears to be justified since the majority of open university students are considerably more diverse than their counterparts at the more traditional campuses—diverse not only in age and experiential background, but in language proficiency and academic preparation. Administrators, in particular, are concerned as to whether faculty members are aware of how to work most effectively with students whose competency in the language of instruction may be somewhat limited or whose academic performance may be significantly affected by the students' particular socio-ethnic-economic background and/or by their current living situations. Questions are being asked as to whether a minimal admission standard should be required so as to more readily assure satisfactory academic performance. Another concern refers to whether special services and policies should be initiated and adapted; if so, how can they be expanded and modified so as to function more satisfactorily for the students?

These are troublesome questions confronting university faculty members and administrators. Nonetheless, these and other concerns need to be addressed at both the faculty staff, and administrative levels.

Faculty Members And The Teaching/Learning Setting

Ideally, highly competent instructors are sensitive to meeting the needs of all students. But, as many of us know, university instructors generally come to teaching as educated academicians in their particular fields and not as experienced specialists in the teaching/learning process. Most of them literally learn to teach 'on the job'. Some, of course, are 'naturals'—inspired lecturers who are also responsive to the individual needs of their students. But, more often than not, university instruction is limited to information-giving—that of "telling 'em and testing 'em". It is, unfortunately, as someone once said, "College professors assume that if it's taught, it's caught". For non-traditional students in the open university, to have 'caught' the overall information—let alone the nuances and the specialized academic jargon—the problem is compounded, largely due to the unfamiliarity with the formal, scholarly language of the classroom. Even if the students have been able to receive and understand the information, they may be very unsuccessful in expressing what they have learned through the medium of objective, or even essay, tests. Because written testing is the primary medium of accountability in college, many students in open universities

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are at a distinct disadvantage in proving that they have absorbed the lecture and text material---largely because they become confused by language subtleties in objective test items or because they need a longer period of time to compose an essay answer. As a result, many very highly able and conscientious students become exceedingly distraught and often gradually enter into a cycle of minimal performance or even failure, both academically and personally. When this occurs, both the society and the individuals concerned have lost what either could gain from the other.

What is being suggested here is clearly not a bid for the lowering of standards; to do that would be an even worse disservice to students in open universities, many of whom are highly capable. What is being recommended is for university instructors to become more sophisticated in their teaching techniques, by varying the means of information delivery and by offering alternative ways in which students might gather and report their information, and to become more sensitive to the needs of the learners, themselves. The following are a few ideas which have proved successful among instructors at various American open universities.

Classroom Teaching Techniques, Based Upon Differing Learning Styles and Needs

Use many different audio-visual approaches in order to reinforce what is being said during lectures and discussions.

In addition to relevant films and video tapes, the overhead projector is effective in outlining a lecture or simply in presenting the spelling of unusual phrases or words.

Students should also be encouraged to audio-tape lectures in order to review later what has been discussed in class.

Bibliographic lists might well include titles of video and audio tapes that may be available in the library to help students supplement the lecture and text information.

Related to the above suggestion is instructors' emphasis on students' submitting assignments in audio-taped form. (Many instructors find it a refreshing departure to react to such reporting methods, as opposed to having to read many long written papers).

The importance of office hours should be stressed; appointments might even be scheduled at the outset to discuss concerns which may be unique to them. (Prior to the appointment, students should be asked to complete a data form, such as the sample in Figure 1; with this information, instructors can become better acquainted with the students's individual background.)

Small discussion groups in class provide an opportunity for students to interact; the arrangement not only provides needed variety but allows students to contribute perspectives to various topics.

Credit can be given to students who are willing to serve as peer tutors to students who need extra study. (Peer tutoring is often equally enlightening to both the tutor and the tutee).

Instructors within one department or discipline are encouraged to develop lists of specialized language and/or concepts which may not be easily understood.

A contract approach to the required learning of a course offers many options for students to pursue, as related to their particular learning needs and strengths. (See Figure 2). In addition to allowing for alternative ways of reporting information, such as the students' audio-taping their responses to various required assignments, a learning contract provides flexibility in terms of gathering information, such as experiential observations/interviews of field experts, or the viewing of supplementary video-tapes and filmstrips. The contract method can serve as a strong motivation factor for students wishing to pursue projects directly relevant to their post-graduation careers in their home areas. And through the broadest use of the contract approach, it is even possible for student and instructor to collaborate together on research, each benefiting from the unique contribution of the other.

Above are teaching methods, some or all of which faculty members may wish to adapt or incorporate into their instructional program in order that the learning objectives of their courses be more fully met by a greater proportion of their students. It goes without saying that certain disciplines are more conducive to one or more of the methods, but alternatives are definitely there for the teaching of every subject; and for those instructors willing to experiment, they will find the teaching satisfaction to be commensurate with the originality and the effort they have put forth. (Later in this article are listed a few ideas for a faculty development workshop with suggestions that may help lead instructors toward an attitudinal awareness concerning the learning needs represented by the diversity of students).

Administration Of The University Environment

Throughout students' university matriculation, it is the coursework and the related faculty that most directly affect learners' academic experience. However, it is the administrative policies and student services that can potentially supplement and optimally influence the learning experience for students. The resources listed below may or may not directly correspond to those found at all open colleges or universities, but they tend to represent the services, in one administrative form or another, that are available on many of the campuses. The following suggestions are offered as possibilities to enhance the administrative support system for students and to help faculty members become more effective in their mission to educate students of the open college or university.

Administrative Policies And Student Services

Academic Advisement Center

Academic advisement is an important service on any campus. But at an open university or college, it is often critical to the success of its students' learning experience. Academic planning under the supervision of a knowledgeable advisor must take into account the student's individual academic background, language proficiency, living situation, and career goals, among many other considerations. Both long- and short-term planning are essential for an efficient matriculation and progression in meeting academic requirements. (at the department level students should be assigned an additional advisor for the duration of the student's enrollment on the campus.)

Library

During the students' initial orientation phase on campus, a comprehensive tour of the library should be scheduled in order to acquaint the students with the services, catalog system, procedures, and holdings of the library. Ideally, such tours should also be available as individual, pre-taped, guided tours.

Learning Assistance Center

A centralized tutoring service for each and every instructional subject on campus can be an invaluable supplement to classroom instruction. In addition, resources and workshops in the Learning Assistance Center should be available in study skills and in language proficiency.

Educational Planning and Policies Committee (Academic Senate)

The Academic Senate might well consider inviting student representatives to attend the meetings so as to advise and/or to have a vote in the decisions of the senate and its subcommittees.

Office of Academic Affairs

Budgetary arrangements should arrange stipends for faculty members to reform teaching methodology and curricular content in their courses. Release time should be provided for instructors willing to teach innovative courses that are especially related to the unique needs of students in an open university.

Research Office

The Research Office, in collaboration with the Center for Faculty Development, can inform faculty members of international exchange positions. Participants would have the opportunity to teach or research at open universities in another country with the goal of gaining from the experience of other institutions.

Center for International Education

The staff of the Center for International Education could be instrumental in coordinating opportunities for both students and faculty members at campuses in other countries. Efforts should be made to establish on-going institutional linkages with other open universities throughout the world.

Student Services Office

The Student Services Office should be adequately staffed to provide a wide variety of functions, such as assisting students to locate housing, providing for personal counseling, helping to resolve financial problems, coordinating transportation arrangements, and locating part-time work, among many other personal concerns of the students. The office might further serve to acquaint peers from similar geographical areas and academic/career interests. Through student services, leadership might be offered in the establishment of appropriate student organizations.

Career Planning and Placement Center

In collaboration with the Advisement Center, staff members could help to coordinate in-service, on-site work experience. The office might also organize a team of students for a 'critical national need' project; in coordination with the Advisement Center, an academic program could be specifically designed, as appropriate, to conform to the project requirements.

In addition, once students are graduated, the center's staff could assist student in locating employment. In addition, an effort should be made to continue the contact between the university and the graduates in order to initiate periodic re-training.

Center for Faculty Development

Every effort should be made to coordinate the functions of both the Center for Faculty Development and the Student Services Office in order to more effectively meet the needs of both the students and the faculty. The Student Services Office could distribute

questionnaires to students to develop a needs-assessment which faculty members could consult in an attempt to respond to student recommendations.

In addition, a list of students with unique experiential backgrounds could be distributed to faculty members, as appropriate, to assist instructors by making presentations to classes.

The Center for Faculty Development could coordinate with the Career Planning and Placement Center to establish potential sites for internships that might assist faculty members in incorporating experiential learning into their courses.

In order to sensitize faculty members to an attitudinal awareness of students' needs in an open university, workshops should be conducted. Included in such seminars would be activities to acquaint participants with the reality of different learning styles and the need for corresponding variety in instructional approaches.

Conclusion

In the United States, access to universal higher education is considered integral to the values of egalitarianism and an educated voting public. Central to these commitments is the existence of open colleges and universities--institutions which honor the uniqueness of their diverse student populations and whose mission it is to optimize the contributions of each individual participant. No matter what the physical setting, open higher education should readily articulate with the missions of other educational institutions and with the manpower needs of the country. Indeed, a nation's commitment to open higher education is a bold and commendable investment---one which requires energetic and creative instruction, visionary and assertive leadership, and expanded and flexible student services.

Figure I
Personal Data Sheet

NAME: _____
STUDENT NUMBER: _____
LOCAL ADDRESS: _____

HOME ADDRESS: _____

Academic Focus: _____
Educational Background: _____
Professional/Academic Aspirations: _____
Interests/Hobbies: _____
Goals/Plans While At The University (personal, academic, professional): _____

Responsibilities:
 Other classes (please list): _____
 Family commitments: _____
 Other (please specify): _____

Former work/job experience: _____
Comments (special concerns, unusual circumstances, handicaps, etc.): _____

Figure 2

Contract Of Involvement

Submitted to the instructor in fulfillment of the requirements
for the course, Educational Psychology 350, CSULB

I. Requirements for the evaluation of "Pass"

Regular Attendance

Reading and reporting (written or taped) of weekly handouts

Class participation

Reading of text: Newman, Barbara and Newman, Philip. **Development Through Life: A Psychosocial Approach** (Homewood, Ill.: The Dorsey Press, 1979).

Satisfactory achievement on weekly reviews--or equivalent reading and reporting (written or taped) of research on the weekly topic

II. Requirements for the evaluation of "Exceptional Credit"

Satisfactory completion of any one or more of the following projects:

Exploring an area of interest in the form of an in-depth review of research/AV resources. Please indicate on the reverse side how you plan to report your findings by submitting brief proposal.

(i.e. genetic counseling; cognitive, personality, language development. See chapter bibliographies, the list of professional journals)

Field experience, followed by either a class presentation or a journal-write-up Please confer first with instructor about the details of your intended involvement.

Completion of 14 Task Sheets from text (written or taped responses); one due each week.

Research paper (experimental or descriptive)

Please define the topic on the reverse side only after having explored potential resources.

Case study and write-up. Please specify below your area of interest.

Supplementary reading/Audio-visual viewing, with written or taped summaries and reactions.

Position paper on a current topic, such as a complete rationale for financial support for access facilities for the handicapped; interdisciplinary professional development of pediatricians, social workers, and psychologists. The paper should document legal decisions and also project budget information. Please describe below your particular topic.

Other alternatives: Please indicate below what the project is and how you intend to report your findings.

Signature _____ Printed Name _____

Date _____ Student Number _____ Grade Goal _____

The instructor agrees to facilitate the student, in terms of an individual and group process, in the fulfillment of this contract.

Instructor's Signature

EDUCATION IN TECHNICAL SUBJECTS THROUGH OPEN UNIVERSITY*

Introduction

With the explosion of knowledge, modern man needs to update his equipment continuously, irrespective of the quantum of his exposure to formal education. The formal education has its own limitations both because of the swelling numbers and also because of certain constraints on an individual, for instance his physical disability, full time employment, or his posting in a geographically remote area.

Distance Education, which includes Correspondence Education and education through radio, television and mass media, is the most outstanding feature of modern education and has a definite purpose to fulfil in society as the future educational needs of individuals and groups have to be met. It provides a second chance for receiving higher education to those who for one reason or the other missed the opportunity of receiving the same at their normal age. The chief advantage of this mode of instruction is that the students can study at their "own time" and in their "own home". In the early stages, Distance Education was confined to Correspondence Education as the only mode of imparting instruction. But now the course material is supplemented by radio-television broadcasts, contact programmes (or short-resident-sessions), and the education through this system is known as an Open System of Education.

In 1850, William Sewell of England had stated "though it may be impossible to bring the masses requiring education to the University, may it not be possible to carry the University to them?" The motto of the Open system of education is "learning at your doorstep". From England, the idea of developing Correspondence Courses travelled to the United States. According to a survey in 1970, there are about five million Distance Education students in the United States. The system has now become extremely popular in most of the advanced countries--U.S.S.R., U.S.A., U.K., France, Japan, Germany, Sweden, Norway, New Zealand and Canada. In New Zealand even the primary education is covered by this system.

Short - Comings Of The Open System Of Education

In Conventional Universities there is a face-to-face interaction between the teacher and the taught, thus permitting immediate explanation, reaction, feed-back and correction. But the Open system of education, because of its very nature, has certain drawbacks. Three main short-comings of the system are : -

1. Lack of student-teacher and student-student rapport :

Unlike traditional system of education, the Open system of education lacks considerably in student-teacher and student-student interaction. In a class room lecture,

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expression of doubt by a student not only makes the teacher think but also rather initiates the thinking process in the minds of other students of the class, thus leading to greater indepth comprehension of the subject matter. On the contrary, in the Open system, the student receives the information from the communication media passively. Even if a query arises in the mind of a student, it is smothered because of the absence of face-to-face interaction. Moreover, many doubts/queries do not sustain for longer periods of time.

2. Over-dependence on correspondence material :

The correspondence material received by a student in the Open system of education may be equated to the notes given by a teacher in the class room lecture and all the disadvantages associated with the notes-giving in the traditional system of education become a part of the Open system of education with regards to correspondence material.

3. Relative obsolescence of the information communicated :

In the Open system of education, since the information is to be prepared on a mass scale, there is bound to be some time-lag between the production of the material, the delivery of the material through the media and the reception of the material by the students. This time-lag in some cases makes the information relatively obsolete. Such obsolescence is not present in the traditional system of education.

Science Education Through Distance Education

All the shortcomings in the Open system of education can be overcome to a great extent and the education in Science and Technology can also be imparted by this system, if care is taken to meet the following requirements:-

1. The student should depend more and more upon library and reference material than on the correspondence material. Adequate library facilities be provided by establishing country-wide network of Library Centres, mobile libraries and a postal library service. Depending upon the library will not only help the student in having access to the original sources but would also help him in getting a variety of information on a specific topic. This would lead to healthy habits of reading and consulting the original sources.

2. A useful rapport should be developed with the Distance Teacher to mitigate the "feeling of isolation" of the students. For this purpose, the frequency of the short-term contact programmes be increased and the queries of the students cleared as in a traditional class room lecture. In these short-resident-sessions, students attend lectures, seminars, tutorials and receive practical experience in their respective disciplines by carrying out practical work in laboratories and workshops.

These programmes should be organised at places where there is a huge concentration of students, and where academic facilities like library, laboratory, workshop etc. exist; and where accommodation for residence and teaching is available and also the experts in different fields.

3. The services of subjects experts are requisitioned in preparing correspondence material and radio-television scripts etc., and the despatch of the reading material be so regulated that the students have it in their hands when they have short-resident-sessions and radio-television broadcasts. Further, the time-lag between receiving of the Students Response Sheets (S.R.S.) and returning the same after correction and comments, be minimised.

4. Radio and television broadcasts in the form of cassettes and video-tapes is made available at various regional centres for the benefit of those who either missed the broadcasts or would like to listen to the same again.

5. Lastly, the pre-recorded information should be transmitted by telephone where possible; and an extensive use be made of audiovisual and mass media such as video-tapes, film strips and other sophisticated gadgets.

Open Universities And Their Role

The Open University (O.U.) as the name indicates is open for all. It came into existence for the first time in U.K. in 1971. It offers Bachelor's degree and there is no entrance requirement but the examination at the end of the course is quite rigorous and exacting. The study at this University consists of a combination of Correspondence Courses, radio listening, television viewing and periodical tutorial courses.

On the pattern of the Open University of U.K., during the last decade a number of Universities have been established the world over, the pre-entry qualification in most of them being 10 - 12 years of schooling.

Open University is able to provide education at a lower cost as compared to the conventional Universities and the same can be used for imparting technical education also because they use multiple media of instruction which include Radio, T.V., V.T., films, kits and computers etc., in addition to correspondence material and contact programmes/short-resident-sessions.

The objectives of the Open University are somewhat different from those of the traditional University. While the former generates an awareness which is generalistic and synoptic claiming to operate mostly in the area of further education, the latter aims at creating experts and specialists in various fields who can contribute as researchers and scholars. Each institution has a specific role to play and serves society in its own way.

Role Of Distance Education In India

In July 1962, in pursuance of the recommendations of an expert committee under the Chairmanship of Professor D.S.Kothari, Chairman University Grants Commission, University of Delhi made an important landmark in the history of education in India by starting Correspondence Courses under a body called Directorate of Correspondence Courses and Continuing Education. The syllabus, examination as also the University degree for the Correspondence Course students are exactly the same as for their Counterparts in the regular Colleges of Delhi University. The minimum eligibility condition for entrance is that one must have passed the ten plus two examination of Delhi Board or an equivalent examination. The correspondence material is supplemented by radio broadcasts by 'Delhi Doordarshan' organised by a special cell within it known as "University of the Air". Even at the end of the first year, it was observed that the examination performance of the Correspondence Course students compared favourably with that of the regular colleges.

The successful experience of Delhi University in conducting this pilot project bearing excellent results set other Indian Universities thinking in the direction of introducing Correspondence Courses in their Universities at different levels. A committee appointed by the Government of India in 1964 under the Chairmanship of Professor D.S.Lothari recommended that "own time education through programmes like Correspondence Courses should be expanded as widely as possible and should also include courses in Science and Technology".

Punjabi University, Patiala was the second University in India to offer these courses. Then came Rajasthan-Jaipur, Meerut, Mysore, Madurai, Himachal-Simla, Punjab-Chandigarh, Bombay, Venkateshwara, Andhra and Madras Universities, and today the

Correspondence education is taken up by as many as twenty two Indian Universities in various disciplines--undergraduate post-graduate, law, in-service teacher's training and some vocational courses.

India has now taken a great leap in the field of Distance Education by establishing the first ever Open University in August 1982 in Andhra Pradesh, Hyderabad. It has been modelled on the lines of the Open University of Great Britain. The planners of this University wish to give an impetus to Continuing Education and are formulating Science Education programmes so as to keep the working men and women abreast with the modern scientific advancements in the world. Some higher technological courses and some foundation courses in Humanities, Social Sciences, Economics etc., are being designed.

In August 1983, New Delhi also launched an 'Open School' scheme to answer the long felt need of non-formal secondary education in India.

The establishment of the Open University in Hyderabad has ushered in a new era in the history of education in India. The walls of the formal system of education have been broken and India would soon be on the world map of literacy. Now there may be a chain of Open Universities in India but personally I am in favour of only one Central Open University or some National Institute for Distance Education where Distance Education courses suited to a country's needs can be planned and developed. The teaching faculty of the Open University and the subject experts, should feel proud of their involvement in a highly innovative and novel system of education in the fast changing world and should hold their heads high in society.



CURRENT STATUS OF DISTANCE EDUCATION IN KOREA*

Introduction

It is twelve years since a public educational institution through correspondence and broadcasting began to operate in Korea. On 15 November, 1968, a memorable date in the annals of education of Korea, the government put into effect the amended Education Law, Paragraph 2, Article 114 of which said: "A college of correspondence may be established within a national university." That provided the legal basis for a national college of correspondence. In accordance with that provision, Korea Junior College of Air and Correspondence (KCC) was started within the Seoul National University on 9 March, 1972. On that same day, Presidential Decree No. 6105 governing the establishment of the college was also promulgated.

On 10 March, 1973, the Education Law was again amended to make room for high-school courses through correspondence and broadcasting. Presidential Decree No. 7008 and Ministry of Education Regulation No. 335 of the same date came into effect. On 23 March of the same year, correspondence high schools were started at eleven high schools for boys and girls in Seoul and Pusan.

Prior to the operation of those air and correspondence college and high schools, special-purpose course through correspondence and broadcasting were not entirely unknown in Korea.

Over a century before the Tutorial Lecture Classes Programme at Cambridge, England (1773) which is said to be the first attempt at education by correspondence, or the Correspondence Program of Chicago University (1892), the nation's pragmatist scholar Sungho Lee (1681-1763) is said to have initiated a correspondence course for the benefit of commoners.¹⁾ 'During the Japanese occupation and subsequent to it, many self-learning Koreans benefited from subscribing to the so-called Correspondence Lecture Series of secondary and college levels.'²⁾

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1) Sungho Lee (1681-1763) is said to have prepared in epistolary form a body of educational courses which included such diverse subjects as Chinese classics, history, geography, language, phonetics, metals, etc.

2) The best-known one was Waseda series before 1945. Since the end of the war, Danguk University has produced in 50's several correspondence lecture series on law and political science, and Tongbuk Middle and High School put out secondary school course series.

School - and social - education programmes through broadcasting had also been practised. Korean Broadcasting System (KBS) started its Educational Broadcasts for Schools as early as 18 June, 1951. In April, 1969, KBS supplemented them by inaugurating Television programmes. School broadcasts in Korea are therefore over thirty years old.

In the 60s, I organized the KBS Farm Radio Forum Programme (1962-64) which was regularly put on the air for farming populations as a social education programme. The content of the programme consisted of the latest agricultural informations and a variety of courses for the improvement of life on the farms. Listeners were given a printed text a week in advance and listened into two radio broadcasts of half an hour each per week, where by they were educated to read and conduct small-group discussions.

For the production of the programme, KBS organized a farm radio forum production committee with the result that it was recognized abroad as well as at home as an effective and successful radio and correspondence educational programme, an excellent course of social education.

When, however, the KCC was established, no attempt was made to learn from the experiences of conducting such a variety of correspondence educational programmes for decades before the inception of the KCC. It is unfortunate that, when something new is introduced to this country, we do not seek experts' opinions or learn from similar experiences, consequently ending up by repeating trials and errors. The case of the education through correspondence and broadcasting was no exception. Distance educational institutions of all levels in Korea are facing many problems and difficulties: development of adequate courses for self-teaching people, compilation of teaching materials for such learners, acquisition of exclusive broadcast channels and of production specialists, to name only a few. Now it is obvious that these remain as yet unresolved problems because the authorities were too impatient to foresee and prepare for them when they so hastily brought the KCC into being.

Despite many problems and difficulties facing our institutions for distance teaching, they have come a long way since their beginnings. It is to their credit that the whole nation is beginning to appreciate the value of their work.

KCU-Its Birth, Background and Ideals

As mentioned earlier, the KCC offering 2-year junior college courses came into being in March, 1972. Two years later, eleven public air and correspondence high schools began in Seoul and Pusan. However, the legal basis for the two kinds of institution as part of public educational system was obtained in November, 1968 and March, 1973 respectively.

It is interesting to recall that it was quite by chance that an amendment of Education Law for a correspondence college was contemplated. As the *"History of the Korea Air and Correspondence University between 1972 and 1982"* points out, the idea of a correspondence college turned up as a by-product of the university entrance preliminary examination that was conducted nationally from 1968. The then Minister of Education Kwon O-byong was asked in the National Assembly about the dire social consequence of the examination, i.e., the problem of the vast number of students who failed in the examination. Minister Kwon replied that apart from the state entrance examination he would establish a correspondence college, an institution of higher education designed to meet the needs of those people who wanted to study while holding jobs. He then hurriedly set about to start amending the Education Law.

That may sound like a natural process of policy formulation, but behind it lurked a fundamental stumbling block. Ideals of the distant teaching university and its management

were seriously compromised by a political expediency as was well witnessed again when they planned to start air and correspondence high schools in the wake of setting the high-school entrance examination nation-wide. An educational institution through correspondence and broadcasting, by its very nature, should have been contemplated as part of life-long education, an extensive and effective mode of education through entirely new methods, quite distinct from the conventional school system. It had to be something new, claiming its own unique *raison d'être*.

The conflict between the opportunism of the Ministry of Education and the true ideals of a distance education was evident from the very outset as, for instance, when Seoul National University professors raised questions about the basic ideals of the new-born institution. The conflict still remains unresolved today. KCU is not yet recognized as a full-fledged university, so is supervised by a section of the Bureau of Nonformal and Vocational Education of the Ministry. Use of television is as yet unthinkable, nor is the introduction of such advanced techniques as video-tex, computer-aided instruction, etc. conceivable at the moment.

It was when I was a member of the Ministry of Education Advisory Board that I was impressed by the British Government white paper entitled *The University of Air* (1966) which formed the basis of their Open University. I had the good fortune, too, to inspect the preparatory stage of the university on the spot. Minister Kwon acted on my recommendation and brought KCC into being. Therefore, the subsequent deviations from, and corruptions of, the ideals are a matter of great personal concern to me.

One welcome result of the prolonged deliberations that took place in the KCC Inauguration Committee composed of Seoul National University professors was redefining the purpose of the proposed KCC from "an institution for the drop-outs from the university entrance examination" to "an educational institution for adults who are deprived by financial and other reasons of the opportunity to receive higher education." This in fact sums up the Article One of the KCC Regulations, which stipulates the purpose of the institution as follows: 1) to extend, as part of life-long education, the opportunity for higher education for those high-school graduates who fail to go on to the university, by means of broadcasting and correspondence courses and attendance at lectures, 2) to improve the educational standards of the nation through professional training designed for working people and those about to enter occupations, and 3) to produce trained manpower for the development of the country.

During the three years and four months between the amendment of the Education Law and the opening of KCC, the Ministry of Education and the KCC Preparatory Committee worked to produce the 6th final proposal which laid the groundwork for the new institution. In accordance with the proposal, the college was organized as a 2-year junior college with five departments (home economics, business management, elementary education, agriculture, and public administration), taking 12,000 entrants every year who would earn 100 credit points or more in 2 to 6 years' time to graduate. The Ministry would then recognize their diploma as equivalent to that of a regular junior college. The graduates of KCC would be allowed to transfer to the third-year class of a university if they took and passed the qualifying examination for transfer to university.

The Article 12 of the Decree instituting the college says: "Students of the college shall teach themselves with textbooks and correspondence lectures distributed to them, attend lectures at cooperative colleges for certain periods of time, and take the end of semester examinations given." When KCC started, it was supported by 22 colleges and universities at 9 different localities. The initial departmental setup, teaching methods, and

the administrative arrangements (three divisions and 6 sections) have undergone many changes since. What is remarkable is that the complex process of preparations leading to the opening of the college was carried out by only 8 Seoul University professors and 18 administrative personnel.

It may be useful to recall that it took the British ten long years and mobilization of leading authorities on the matter and a host of BBC experts to prepare for the opening of the Open University. Japan began to contemplate setting up a national university of the air in 1969 and expects to open it on in April, 1985. Therefore, it will have taken them 15 years or more, opinion surveys of television-viewers, investigations into themes for learning, establishment and management development of an exclusive broadcasting station, production of experimental programmes, etc. before a University of the Air will come into operation.

It was nothing less than a miracle that the KCC began operating on such a short notice and so scanty a preparation. On the other hand, it is undeniable and a matter of great regret that the haste with which the institution was conceived and brought into operation gave rise to a number of problems and difficulties confronting the KCU today.

Some of the problems and difficulties that KCU are struggling with today are these: the validity of the curricula of the college for life-long education; development, production, and broadcasting of the media suited to the dissemination of college-level correspondence courses; technical, administrative, and financial long-term policies for dealing with rapidly increasing student population. These could have been foreseen and prepared for before the actual opening of the college.

Outline of the Operation of Distance Educational System in Korea

The start of KCC and air and correspondence high schools in Korea marked the beginning of a new era in the education through correspondence. Correspondence education had been regarded for a long time as at best an irregular and remedial social educational system. Korea, however, has come to have a new, regular institution for distance education. Unlike the British and Japanese models, the KCC emerged as a reality rather abruptly, without a lengthy period of public discussions or experiments with trial programmes, so that the general public failed to perceive the significance of the birth of the KCC. However, it was recognized by a small segment of the educated population as a revolutionary event. Now, twelve and ten years old respectively, the KCU and air and correspondence high schools up and down the country have now come to enjoy both the attention and recognition of the general public.

As of March, 1984, KCU (cf. Table 1), has now 12 departments offering 5-year university courses and one junior college course (early childhood education), the student population amounting to 140,000. The number of air and correspondence high schools has increased over the years to 48, located at 24 large and medium cities throughout the country, catering to 35,000 students.

The Table 2 illustrates the typical career of a student from his matriculation into KCU to graduation. Firstly, candidates for admission are selected by means of computer lottery from among the graduates or prospective graduates of high schools and those who are recognized as having earned equivalent qualifications as high-school graduates. The inputs into the computer are programmed, taking into consideration area quotas within the over-all departmental admission quotas and the candidates' highschool academic standings (or the results of the qualifying examination). Consequently, only the upper-grade graduates

of high schools have been admitted. There is a special provision for central government agencies to send their men, after consultation with the Minister of Education, to KCU for training by commission. These special entrants may not exceed 5 percent of the total admissions. Only elementary school teachers have so far availed themselves of this provision.

Secondly, the curriculum is divided into general education and specialization; and all courses are divided into compulsory and elective courses. A candidate for BA is to take 41 or more credit points in the general education area, 72 or more credit points in compulsory specializing subjects and 27 or more in elective specializing subjects. The minimum requirement for graduation is set at 140 credit points. A student specializing in early childhood education at junior college level is required to earn at least 80 credit points of which 26 or more points must be taken in general education area and 54 or more points in his major subjects. A BA student is expected to finish in 5 to 10 years, and the junior college student in 2 to 5 years, though a BA student of superior achievements can finish the BA course in 4 years.

KCU has its own system of credit point. One credit point represents at KCU self-study of KCU textbooks, listening in to four radio lectures of 30 minutes each per a week plus 16 days' attendance at lecture-sessions a year. In addition, the students are expected to present 2 term-papers per semester, to make use of lectures printed in the KCU newspapers, to utilize study guides compiled by KCU teaching staff, and attendance at lectures voluntarily organized by area groups. What has to be pointed out in this connection is that only radio broadcasts are available and television lectures are as yet not offered. This may be due to the Korean national security situation and the difficulty of obtaining necessary TV channels for this purpose. But the real reason may lie in the inadequate perception by the authorities of the vital need in a modern state of education through broadcasting. The steady increase of departments in KCU has already created a dire shortage of allotted broadcast hours. KCU on its part is negotiating with the government ministries concerned for introduction of TV lectures on the one hand, and is beginning to produce its own radio-cassettes and TV-lecture programmes through VTR recordings, on the other.

Recollection and Evaluation of the Twelve Years of The Korea Air and Correspondence University.

Reviewing the 12 year history of KCU, it started as a junior college within the Seoul National University in March, 1972, developed into a 5-year university offering BA courses in February, 1982, and at the same date got separated from the Seoul National University to operate as an independent institution, namely Korea Air and Correspondence University. It may be premature to evaluate the achievement of the University before 1985 when it will be graduating the first batch of BA's. On the other hand, the college had graduated 9 junior college classes between 1972 and 1981, so it may not be entirely out of order to review the performance during the past ten years of period from 1972 to 1982.

I wish to refer to Tables 5 and 6 for the statistics on applicants, admissions, and graduates. The tables would show that during those ten years, 534,000 men and women applied for admission, of whom only 153,000 (30.74%) were admitted. During the same period, 33,800 students successfully completed the prescribed courses of study offered by five departments. The number of graduates represented 29.9% of the total admitted students. The rate of drop-outs in KCC was 70.1%, which stands relatively high compared

with other distance teaching institutions of similar type in other countries. We believe that such a high drop-out rate may reflect the high standard of teaching that the KCC has stringently maintained.

The high standard of academic excellence that KCC has been setting on itself is also reflected in the outstanding success rate of its graduates at the national qualifying examinations for the third-year enrollment at four-year colleges or universities. The success rate as shown in the table stands at 22.2% against 6.6% of other conventional junior college graduates. During the same years, over 33,800 graduates of KCC wanted transfers to four year colleges and more than 2,900 of them got successfully transferred.

Furthermore, the result of a survey conducted by myself in August, 1983 showed that the overwhelming majority of the employers of our students were satisfied that the students of KCU were model workers, that they contributed to enhancing the productivity and efficiency of their business as a whole, that their presence helped to promote good human relationships, and that they were invariably positive and creative in their general attitude. All this would prove that the quality of the education that the KCU has been providing is indeed excellent. The institutions that responded to the survey were the ones employing ten or more KCU students each and included government offices, educational institutions, financial institutions and business firms, 45 in all.

That was a very encouraging response because the basic purpose of the KCU education is not only to produce academically excellent persons, but to produce life-long learners who are capable of establishing good human relationships at their jobs and at the same time keeping up with their study for the whole span of their lives.

Thirdly, it may be worthwhile to see how cost-effective the KCU was.

During the ten years between 1972 and 82, KCU spent the equivalent of approximately US ten million dollars for producing 33,000 graduates, which by any standard was very effective. Table 3 shows that it took a mere US 300.21 dollars to provide a junior college student with two-year further education. It is quite surprising to realize that the government share of that amount was US 113.18 dollars. In view of the fact that in every developing country education suffers chronic financial deficits, it is gratifying to know how cost-effective the distance educational system is.

To show how cost-effective KCU has been, I wish to refer to Table 4. During the same period, a regular junior college of which there were 124 in the country spent on the average US dollars 674.50 on a student. The total output of those 124 junior colleges was 28,000 as against 33,000 graduates of KCU. The educational cost in Korea is relatively low even among developing countries. When the KCU expenditures of 300 dollars per head is compared with US 1,177 dollars that the British Open University spent in 1977 to train a student, the cost-effectiveness of KCU stands out most impressively.

The student's share of the cost, or the tuition at KCU stands today at the equivalent of US 93.75 dollars per year. If that could be doubled, KCU could provide a substantially better education through expanding its facilities by taking advantages of scale, without drawing from the national treasury any additional financial assistance. Incidentally too, increased tuitions will have the effect of reducing the drop-out rate.

Prevailing Problems Confronting the KCU

So much for the performance of KCU during the past twelve years. Though it was originally conceived as a by-product of the national university entrance examination, Though it was it has developed into a new educational institution, unique in its purpose as a venture dedicated to the ideal of life-long education. It has been so recognized and appreciated by the

general public, to whom KCU represents today an educational institution accomplishing "a quiet revolution in education"

However, now that it has been reorganized from a two-year junior college into a five year university, shedding its ties with Seoul National University, we may well expect some problems and difficulties in the way of KCU's further development.

KCU now (1984) has 140,000 students who will be producing 300,000 term-papers, which have to be corrected and returned to the students by the faculty (about 60 members) and their graduate assistants of each supporting institution in a month or two. Use of computers alone is not adequate to the tremendous task of working on the term-papers and of evaluating the students' individual achievements. Supporting cooperative colleges in the provinces taking KCU students during summer and winter vacations are already finding the responsibility quite beyond their capabilities. Nor is it possible to increase the number of supporting cooperative colleges. Measures to reduce the workload of supporting professors are not readily available.

One solution to this problem, in my view, may be to establish co-separate faculties of correspondence education in cooperative and other colleges and universities and leave to them the actual task of teaching and supervising the students, while the headquarters of KCU would concentrate on the production and distribution of teaching materials, production and transmission of radio/TV programmes, and production of reference books, experiment kits, etc. In such a way, an entirely new system of operation of the principle of advantages of scale could be devised to meet the pressure of this dire problem.

Secondly, the problem of securing an adequate system of producing, transmitting and managing radio-TV programmes cries for solution. IN Korea, production and transmission of all the broadcast programmes call under the jurisdiction of a government department other than the Ministry of Education, which has no say on radio-wave control. That is an intolerable situation in this day and age of ever-expanding use of electronic media. The time allotment of KBS FM for the use of KCU is too small to handle ever-increasing number of subjects to be taught. TV lectures are as yet unavailable. AS a partial remedy for this, KCU has decided to produce cassette tapes and experimental TV programmes on its own initiative, but I do not consider them a final solution of the problem. KCU should have a department of educational technology within its setup to make a constant study and development of effective teaching materials. It is hoped that the government will allow KCU to operate its own radio/TV transmission system because therein lies the crux of the whole matter.

Thirdly, the need of a big computer system is being urgently felt. The need is all the greater for KCU as it is a new venture requiring trust by the people and as it is expected to develop new teaching techniques. The computers available today in KCU are only two; FACOM 230-28S and 230-48, each with a capacity of 512-KB and 400 MB respectively, plus 32 CRTs for students' practice purpose. They will become inadequate for processing administrative matters alone when the first cycle of a five-year university course is completed in 1985. KCU is negotiating with the authorities for acquiring the latest models of computers systems which can be utilized both for data-processing as well as computer-aided instruction, for which the understanding and cooperation of the government is absolutely imperative.

Fourthly, the activity of the students' union should be promoted. The KCU Students' Union aims to promote friendship and group activities among the students. The peculiar situation of KCU students, however, gives rise to peculiar problems. It is headquartered in KCU, Seoul and has 116 branch unions throughout the country. Branch unions are known to organize in their respective localities study meetings and lectures to

which they invite prominent professors from Seoul and other provincial universities. Activation of the students' union, therefore, will strengthen the ties and contacts between the staff and students, on the one hand, and deepen the students' learning processes, on the other.

For this purpose also, KCU headquarters in Seoul need to be kept in close contact with provincial study centers, which could only be done by the use of electronic communications system.

Nearly half of the Japanese private colleges and over 70 per cent of junior colleges that operate correspondence courses are said to have organized study groups by students' residential areas, whereby they promote their students' incentive to learn, community study, etc. The Students' Union of KCU will hopefully grow along the same line of development.

Last but not least, KCU is facing the most crucial problem, namely, that of clear-cut defining the legitimate position of the distance teaching institution in the national scheme of education, in particular reference to the overall system of lifelong education.

Japanese correspondence education preceded the advent of the idea of life-long education and was carried out under the provision of School Education Law and Social Education Law. Recently, the establishment of the University of the Air made it possible to exchange credits with other colleges, and to operate certain courses of study which are beyond the capabilities of regular institutions, thus setting examples to all the other higher educational institutions including conventional colleges and universities. In Korea, diverse systems and modes of education operate under one single Education Law. The social Education Law that come into effect late last year does little to define the legal and legitimate character of distance educational institution.

The Constitution of the Republic of Korea uniquely guarantees the people's basic right to life-long education. If that is to become a reality, the character and the legitimate position in the nation's education system of the distance teaching institutions should be clearly defined, and that character and position should also be reflected on the organization of the Ministry of Education.

The distinction between formal and informal education is being eliminated today throughout the world. Informal elements are being incorporated in school curricula, while social and further education programmes for adults which have been neglected or failed to get recognition because of their informal nature, are bringing in the elements of formal education. In view of this world-wide trend, it is imperative that the roles and functions of the entirely new types of educational institutions like KCU and air and correspondence high schools have to be clearly defined in the context of national education system as a whole.

Closing Words

The distance teaching institutions around the world today simply refuse to become a sort of para-educational institutions qualitatively inferior to regular, or conventional colleges, and all-day schools. The fact is that they are beginning to set examples and models for the conventional types of schools, to emulate in such varied areas as integrated curricula, production and supply of excellent teaching materials, development of effective learning methods, and so on, which are frankly beyond the capabilities of the conventional school systems.

It was for this very worthy purpose that the United Nations University International Centre for Distance Education was established within the British Open University in England. And the Consortium on Innovation in Higher Education for Asia and Pasific at the Sukhothai Thammathirat Open University in Thailand is another so established and operated

under the supervision of the UNESCO'S Regional Bureau for Asia and the Pacific.

In this context, nothing is more urgent for the Korea Air and Correspondence University which has had a considerable period of existence and experiences to secure for itself a unique *raison d'être* as a member of the worldwide family of distance teaching universities. It will keep in close touch with its counterpart institutions at home and abroad, explore the means of exchanging credit points, teachers and students, and in the area of general education and basic science curriculum, develop model programmes for the benefit of conventional colleges and universities or other institutions of higher education as much as for itself.

Table 1 Admission Quotas and Enrollment by
Department at KCU (1984 spring)

Item Course	Department	Admission Quo- tas	Enrollment					
			1st year	2nd year	3rd year	4th year	5th year	Total
University Level Courses	Elementary Education	2,000	1,268	4,612	6,712	4,677	4,068	21,337
	Korean	2,000	2,221	-	-	-	-	2,221
	English	3,000	3,641	3,310	3,285	-	-	10,236
	Chinese	2,000	2,266	-	-	-	-	2,266
	French	2,000	1,645	-	-	-	-	1,645
	Law	3,000	3,631	2,174	3,190	-	-	8,995
	Public Administra- tion	4,000	5,220	5,083	5,015	6,122	4,531	25,971
	Economics	2,000	2,771	1,331	2,915	-	-	7,017
	Business	4,000	4,781	4,478	4,972	5,134	3,739	23,104
	Management							
	Agriculture	3,000	3,492	1,776	3,445	2,731	2,112	13,556
	Home Economics	3,000	3,313	3,263	3,659	3,181	2,190	15,606
	Computer Science	2,000	2,445	2,126	-	-	-	4,571
College Level Courses	Early Child Education	1,000	1,474	974	-	-	-	2,448
Total	13 Depart- ments	33,000	38,247	29,059	33,189	21,837	16,640	138,972

Table 2 KCU Courses of Study from Matriculation to Graduation

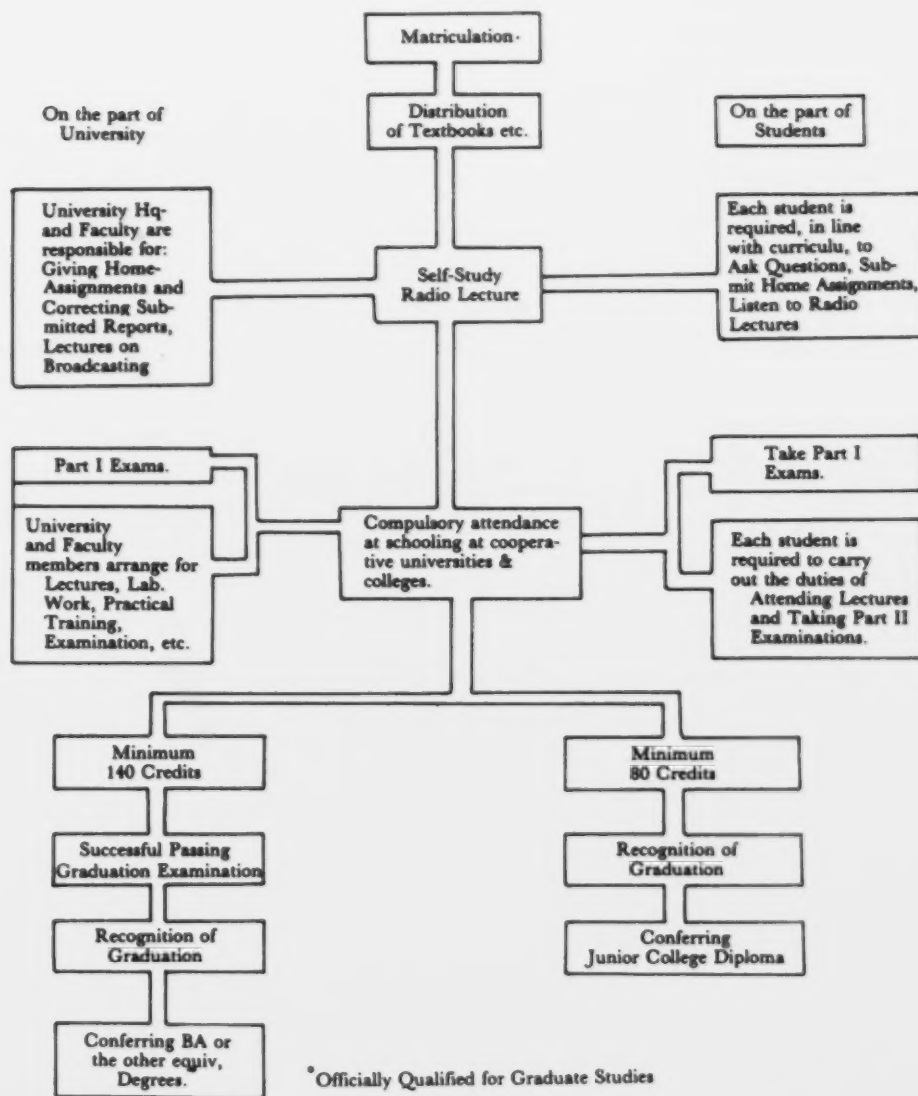


Table 3 Total Amount of Expenditures for Operation of the KCC
During 1972 Through 1981.

Total Incomes:

*Fees (Tutions, Admissions, etc.)	Won 2,668,145,000
*Membership Fees for Students' Union	Won 2,330,633,000
TOTAL	Won 4,998,778,000
	(roughly equivalent to US\$6,480,680)

Total Expenditures by Source of Budgetary Provision.

*State's Subsidy	Won 5,694,846,000
*Contribution from Student Union	Won 2,330,387,000
TOTAL	Won 8,025,233,000
	(roughly equivalent to US\$10,288,760)

*Some Analytical Remarks from the Above Figures.

- 1) The state spent a total of Won 3,026,701,000
(= US\$3,880,000) for the education of 141,377 students of junior college level during 10 years; that is to say, it paid only Won 21,400 or US\$27.09 per head.
- 2) The total expenditures of ten years spent for its 33,848 graduates out of the total enrollement of 141,377 was only Won 8,025,233,000 (= US\$10,288,760). And it would imply that the KCC has carried out successfully its teaching responsibilities to so may students at no more than US\$300 per one graduate.

Table 4 Cost per Capita Student Annum at Conventional Tertiary Education Institutions (1972-'80).

(Unit : 1,000 Won, 1 US\$ = 771 W. 1)

Year	Item Type	Polytechnics	Education College	Junior College	University	Total
'72	total cost	2,820,616.5	1,768,933.0	528,321.7	26,620,672.8	31,738,544.0
	total enrollment	33,004	12,713	3,894	163,932	213,543
	cost per student	85.5 (147.1)	139.1 (239.4)	135.7 (233.5)	162.4 (279.5)	148.6 (224.8)
'73	total cost	4,054,612.3	1,847,302	634,711.5	30,176,143.4	36,712,769.2
	total enrollment	41,374	12,758	4,245	178,050	236,427
	cost per student	98.0 (154.3)	144.8 (227.9)	149.5 (235.3)	169.5 (266.8)	155.2 (221.1)
'74	total cost	6,771,333.7	2,126,069.9	784,638.0	41,991,112.0	51,673,153.6
	total enrollment	50,328	11,176	3,793	192,308	257,599
	cost per student	134.5 (167.0)	190.2 (236.2)	206.6 (256.6)	218.4 (271.3)	155.2 (232.7)
'75	total cost	10,909,683.0	2,975,632.8	1,167,243.0	62,557,645.0	77,610,213.8
	total enrollment	58,500	8,504	3,787	208,986	279,777
	cost per student	186.5 (186.5)	349.9 (849.9)	308.2 (308.2)	299.3 (299.3)	277.4 (285.9)
'76	total cost	15,988,205.4	3,291,760.0	1,338,284.0	85,737,259.0	106,355,508.4
	total enrollment	68,095	5,813	3,976	229,811	307,695
	cost per student	234.8 (202.6)	566.3 (488.7)	336.6 (290.5)	373.1 (322.0)	293.6 (325.9)
'77	total cost	25,731,198.0	3,947,197.0	1,272,190.0	111,453,863.0	142,404,448.0
	total enrollment	86,120	3,376	4,141	251,329	344,966
	cost per student	298.8 (226.5)	1,018.4 (771.9)	307.2 (232.9)	443.5 (336.2)	412.7 (391.8)
'78	total cost	38,687,454.0	4,739,867.0	1,909,545.0	136,105,972.0	181,442,838.0
	total enrollment	110,145	4,308	4,803	277,783	397,039
	cost per student	351.1 (235.7)	1,100.2 (738.2)	397.6 (266.8)	490.0 (328.8)	459.9 (392.3)
'79*	total cost			not available	892,441.0	-
	total enrollment	not available	not available	2,689	330,345	-
	cost per student			not available (not available)	270.1 (not available)	-
'80*	total cost			not available	1,123,199.1	-
	total enrollment	not available	not available	394	350,827	-
	cost per student			not available (not available)	320.1 (not available)	-
Total	total cost				496,654,907.3	-
	total enrollment				2,371	-
	cost per student				(on Average) 305.1	-

Source: Table 53 in 'A Study on the Tertiary Educational Institutions in Korea, by Prof. Chong Chull Kin, and Educational Statistics Yearbook (1979-80).-

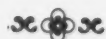
(Table 5) Number of KCC Graduates By Departments and Their Success Rate During 1972 Through 1980

Number		Dep'ts	Domestic Science	Business Administration	Agriculture Science	Elementary School Education	Public Administration	Total
1972	Enrollement		1,793	2,813	1,842	1,876	2,848	11,172
	Graduates		461	733	485	1,007	1,091	3,777
	Success Rate (%)		25.8	26.1	26.3	53.7	38.3	33.8
1973	Enrollement		1,588	2,734	1,616	1,854	2,733	10,525
	Graduates		350	760	398	1,148	1,110	3,766
	Success Rate (%)		22.0	27.8	24.6	61.9	40.0	35.8
1974	Enrollement		1,694	2,766	1,676	1,096	2,754	10,796
	Graduates		358	714	300	1,241	861	3,474
	Success Rate (%)		31.1	35.8	17.9	65.1	31.3	32.2
1975	Enrollement		1,748	2,753	1,767	1,888	2,788	10,944
	Graduates		371	626	291	1,129	885	3,302
	Success Rate (%)		21.2	22.7	16.5	59.8	31.7	30.2
1976	Enrollement		1,739	2,689	1,733	1,817	2,671	10,649
	Graduates		432	585	332	1,037	833	3,219
	Success Rate (%)		24.8	21.8	19.2	57.1	31.2	30.2
1977	Enrollement		1,789	2,674	1,775	1,882	2,717	10,837
	Graduates		563	701	329	1,107	891	3,591
	Success Rate (%)		31.5	26.2	18.5	58.8	32.8	33.1
1978	Enrollement		2,438	3,615	2,231	2,559	3,650	14,493
	Graduates		602	786	442	1,406	1,027	4,263
	Success Rate (%)		24.7	21.7	19.8	54.9	28.1	29.4
1979	Enrollement		2,408	3,596	2,279	4,660	3,649	16,592
	Graduates		384	428	406	2,756	754	4,728
	Success Rate (%)		15.9	11.9	17.8	59.1	20.7	28.5
1980	Enrollement		2,426	3,830	2,237	4,640	3,971	17,104
	Graduates		283	424	232	2,144	645	3,728
	Success Rate (%)		11.7	11.1	10.4	46.2	16.2	21.8
1972	Enrollement		17,623	27,470	17,156	23,082	27,781	113,112
	Graduates		3,804	5,757	3,215	12,975	8,097	33,848
	Success Rate (%)		21.6	21.0	18.7	56.2	29.1	29.0

Source: The History of Korea Air and Correspondence College Between 1972 and 1981. The KCU Press, 1982.

Table 6 (1973-1981) Those Graduates of KCC Who Passed the National Qualification Exam To Be Admitted Into Juniors' Classes of Regular University Compared With the Graduates of Other Conventional Junior Colleges.

Number Year	Graduates of KCC (Junior College Courses)			Graduates of Conventional Jr. Colleges.		
	Applicants	Passed	Success Rate (%)	Applicants	Passed	Success Rate (%)
1973	793	239	30.1	2,955	182	6.2
1974	1,355	321	23.7	4,307	241	5.6
1975	1,477	269	18.2	5,638	292	5.2
1976	1,305	138	10.6	4,141	171	4.1
1977	1,392	530	38.1	3,172	273	7.8
1978	1,792	336	18.7	3,986	345	8.7
1979	2,017	518	25.7	5,374	481	9.0
1980	1,683	415	24.7	1,865	163	8.8
1981	1,336	157	11.8	1,009	26	2.5
Total	13,150	2,923	22.2	32,987	2,174	6.6



Supporting Paper VI

HOW THE PEOPLE'S UNIVERSITY OF CHINA CONTINUOUSLY RAISES THE QUALITY OF HIGHER CORRESPONDENCE EDUCATION*

The People's University of China (PUC), founded in 1950 is one of the key universities directly under the Ministry of Education of The People's Republic of China. Its history can be traced back to the North Shaanxi Public College, founded in 1937 in Yanan, a Sacred place of China's revolution. In 1939, according to the needs of the war of Resistance against Japan, North Shaanxi Public College combined with parts of Yanan Lu Hsun College of Arts and another two Institutes to form a new University --The North China United University, and ran instruction in the Liberated area of North China. In order to meet the needs of establishment of the People's Republic of China and the coming socialistic construction, in 1948, the North China United University combined with Northern University (Located in Hebei Province) to form the University of North China. On December 16, 1949, the State Council passed the resolution for the founding of the People's University of China, then a grand ceremony to open the school took place on October 3, 1950. The PUC was the first University founded by new China, with a view to training various kinds of cadres and specialists for modern socialist economic construction.

During the ten chaotic years (1966-1976), the PUC was forced to first suspend classes, then close down. After the "Gang of Four" was overthrown, in July 1978, the State Council resolved to reopen the PUC. At present the PUC has 15 Departments and 6 Research Institutes. It had an enrolment of 9,000 students in 1983, consisting of about 400 graduate students, 3,500 undergraduate students, 5,000 correspondence students, and about 100 foreign students from various countries.

The 15 departments are Philosophy, Political Economy, Scientific Socialism, The History of the Chinese Communist Party, History, Law, Chinese Language and Literature, Journalism, Archives, Industrial Economics, Agricultural Economics, Commercial Economics, Finance, Planning and Statistics, and Management of Economic Information.

The six Research Institutes are The History of the Development of Marxism, The USSR and East-European Countries, Foreign Countries' Economics, The History of the Qing Dynasty, Population Theories, and Chinese Language and Lexicology.

In the summer of 1951, PUC set up a committee on correspondence education to take charge of enrolment. It continued until January, 1952, when the Department of Correspondence education was established. The first enrolment was carried on in Beijing, Tianjin and Taiyuan, a total of 2,700 correspondence students was enrolled after an entrance examination. This was the start of higher correspondence education in China. The PUC was the first university teaching courses by correspondence in our country. From the first

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enrolment to 1966, when the so called Great Cultural Revolution began, PUC carried out courses by correspondence in about 40 centres of instruction distributed over the north, east and northeast parts of China, with an average undergraduate enrolment of over 5,000 students per year. The graduates totaled 19,800 up to 1966. Most of them have become factory directors, company managers, office heads, or management cadres in various fields.

The Correspondence College of PUC was closed down in 1966, due to the so-called Great Cultural Revolution; and only reopened in 1980. At present, the correspondence College of PUC has 14 divisions distributed over 14 provinces, municipalities and autonomous regions, there are 7,000 undergraduate students studying in 12 different specialities, namely, Industrial Economy, Commercial Economy, Agricultural Economy, Capital Economic Construction, Accounting, Chinese Language and Literature, The Science of Law, Finance, Banking, Management of Archives, Theory of Marxism, and Journalism. More than 1,000 Correspondence students finished their College-Level-Education within three years and have received a diploma awarded by PUC.

Since it was founded, the PUC has devoted much attention to the training of cadres and experts by higher Correspondence education. From the president to the heads of departments, all staff firmly believe that the higher correspondence education is one of the key undertakings of socialist construction, and is naturally a vital task of PUC. The teaching staff in the Correspondence College feel the same pride in their work as the staff teaching in the faculty. To sum up then, without the support of the whole university, especially the president and vice-president in charge of correspondence teaching, correspondence instruction would not be so successful.

In order to develop and raise the standard of correspondence instruction, there must be a large number of full-time and part-time teachers, with stress on the former. In other words, the Correspondence College must have a vast contingent of full-time faculty staff, who are specialists in their own subject and who are interested in correspondence instruction, and in enriching their experience of teaching. Before 1966, there were 105 full-time teachers in the Correspondence College of PUC (accounting for 11 per cent of total teaching staff of PUC). Now, most of them continue to teach various subjects in departments with the title of Professor or Viceprofessor. The prestige of correspondence education depends on the calibre of its academic staff. Without excellent teachers, it is impossible to have quality higher correspondence education. We often say that a factory would rather have 100 products up to standard than 1,000 substandard products. It is the same with training university level students by the correspondence method. This was recognized by PUC at the founding of correspondence education, and there were eight Teach-and-Research Sections established in 1953. Seventy-seven teachers were released from departments of the university to teach correspondence courses. Now, The Correspondence College of PUC has only 35 full-time teachers and two Teach-and-Research Sections. Therefore, the main Correspondence teaching load is carried by departments of the University. The ultimate aim of Correspondence College is to organize a large amount of academic staff devoted to the cause of higher correspondence education.

The Process of correspondence instruction must be integrated with the characteristics of correspondence education. From enrolment to graduation, the Correspondence College of PUC runs an integrated course, or a comprehensive teaching system. The process of the correspondence instruction typically involves the following procedures: (1) Study by the correspondence student in his or her free time, or individual study, (2) Attending Lectures in the allowed time, (3) Completion of homework (assignments) according to schedule, (4)

Answering questions by mail or with the teacher present, (5) Test or examination and presentation of a thesis for the five years BA degree.

The Correspondence College of PUC persists in the system of entry examination. Correspondence students must be high school graduates or hold an equivalent qualification, and pass the entry examination. Every one who plans to enter his or her name for correspondence study, must have completed at least three years of practical experience since he or she left high school. The course or specialties they will choose to study must be related to the kind of work they are doing. Thirty percent of those who sit the entry examination are accepted for enrolment. The significance of the entry examination in correspondence study is to select the good students, in order to preserve the quality of education.

The students study correspondence materials according to a learning progress schedule sent by the Correspondence College. But the student is not isolated and cut off from help during his or her study. Firstly, before every academic year, each student receives a guide book written by staff of the Teach-and-Research Section, explaining how to go about studying every subject or section he or she is enrolled in; Secondly, the Correspondence College passes on other students' useful learning experiences to the students either in writing or orally; Thirdly, the Correspondence College teaches the students to study for socialist modernizations of industry, agriculture, national defence and science and technology; Fourthly, the College encourages the students to develop an attitude to brave all difficulties and to persevere in studying; Fifthly, the College urges the students to arrange their household duties and amusements reasonably to suit their study requirements.

Face-to-face teaching in correspondence education at PUC accounts for 25 per cent of the total teaching hours. Attending face-to-face classes was obligatory for every student before 1966. The rate of attendance was higher than 70 per cent at that time. Although attendance is now not obligatory, the rate of attendance has come up to 95 per cent. Why? Because the correspondence students have caught great motivation to study from the State Council's decision that the University correspondence students in China be awarded the same qualification as those who graduated from conventional universities. Since the teaching hours are rather few, lectures in correspondence education merely simplify and clarify the structure of the courses, and explain the difficult and key points. The broad outline must be kept firmly in mind, especially with regard to supplementary new contents which may not be included in the correspondence materials. To give supplementary new materials is an essential obligation of a correspondence teacher, because often a great many new discoveries appear after the correspondence materials were published.

The Correspondence College asks the students to take notes in lectures and review the notes as soon as they get back home, this is so called "Strike While The Iron Is Hot".

The Correspondence College of PUC requires that the correspondence students should complete their assignments within the fixed time. There are 12-15 assignments in one year. Assignments usually involve the student writing a short paper of about 2000-3000 words, analysing and solving practical problems, applying the knowledge he or she has learned from Correspondence study. Each assignment takes about 7-10 days to complete. The teacher directs the students to further study through remarks on the margin in the paper. If one student fails in his assignment he or she must rewrite it within two weeks, if it fails again, this assignment is marked "Failed". If failed assignments total over one third of one course, the student is not allowed to sit the examination in that course. Besides assignments, we put forward some topics for review and discussion at the end of every chapter. If one student completes all his assignments and makes a serious study of all the topics, he will be an excellent student in his correspondence study, and have a good command of the courses

which he has studied. Continuous assessment through assignments is the best way to check on quality in correspondence education.

Guidance or direction is one of the important elements in correspondence instruction, but it is difficult to do well. This is particularly so in answering questions by mail, which is hard to do on time. Therefore, the guidance which is used most commonly is direct guidance, that is, the teacher answers questions face-to-face. There are three types: (1) The teacher makes a circuit of the student-centres, to give guidance, (2) Period-guidance, that is, the guidance is carried on before the instruction gets into the next stage, (3) Guidance is carried on before the examination, or the systematic guidance.

When each course is ended, there is an examination or test. Courses to be examined and Courses to be tested are laid down in the teaching plan of the College, which is approved by the Ministry of Education. Most courses are examined in writing, the rest orally.

In order to sit the examination, the correspondence students must complete and pass all assignments. The Divisions of the Correspondence College usually inform the departments where the students work when the examination will take place, and ask them to grant their workers engaged in correspondence study paid leave for 10 days or two weeks before sitting the examination. The examination papers are set closely according to the contents of the courses, and naturally marking is rigid. The standard of marking is classified into four grades. First, EXCELLENT; Second, GOOD; Third, PASS; and last, FAIL. If one student gets EXCELLENT from start to finish, he or she receives the title "Excellent Student", and wins a prize.

In the last semester in the fifth academic year, the correspondence students are granted paid leave for 30 days (or are entitled to one day off from work every week for seven months) in order to write their diploma thesis. If the student passes his thesis, he is awarded a Bachelor of Arts degree.

Each element in correspondence education mentioned above is like the operating rules in a modern factory, as long as correspondence instruction is organized and controlled according to the requirements of each teaching element, good quality is maintained.

Higher correspondence education requires control. Since the founding of higher correspondence education in PUC, a guiding Policy has been followed. According to this policy, not only the president of the Correspondence College must be in charge of correspondence education; but each related department and teaching research section must set up a vice head, who has responsibility for correspondence education, and is in charge of compiling the teaching materials, putting forward the drafts of teaching and enrolment plans and presenting these to the College for comment. Finally all these documents must be presented to the President of PUC for approval.

In the related provinces, municipalities and autonomous regions, Divisions of the Correspondence College have been established to take charge of the organization and management of correspondence instruction. They receive the staff coming from Beijing, provide classrooms and rooms for personal guidance or tutoring and instruct the correspondence students how to study according to the requirements of each teaching element as mentioned above.

The characteristics of the management of correspondence education in PUC are (1) Systematization, which means that all aspects of correspondence instruction go on according to Rules. For example, the Rules of the status of the correspondence students, Rules of Suspension and Dismissal from the College, and Rules of Enrolment, Registration, Graduation and Awarding of degree, etc. (2) Correspondence management must reflect the

characteristics of correspondence education, that is, the correspondence student is not only a student of the university, but also a cadre or worker, many of them have family duties as mothers or as fathers, their holidays are short, their learning conditions are very difficult and therefore their years of study are longer than those of students in ordinary universities or institutes. The training quality in Correspondence College is strict, but the learning methods are elastic.

Correspondence students have a two fold nature. On the one hand, they are cadres or workers and must follow the advice of their leadership; on the other hand, they are correspondence students, and must observe the learning disciplines of the university. It is very clear that without the support of their departments the students would be unable to take up their correspondence study. There is a close relationship between Correspondence College and the work units. The Correspondence College must arouse the enthusiasm of the administrations in the work units to support correspondence education, to bring the job of sending cadres and workers to study in the Correspondence College into line with their plans to train cadres, and to provide facilities for correspondence study. One of the necessary conditions of our correspondence education is that the university must cooperate with the students' administrative units. This is one of the reasons why we have a high rate of completing assignments in time, class attendance, and graduation.



*Supporting Paper VII***RAMKHAMHAENG UNIVERSITY : THE MANAGEMENT CHALLENGE FROM PRESENT TO FUTURE*****Introduction**

Thailand is a country somewhat smaller than the state of Texas, and it has a population of over 50 million. It has 14 universities spread throughout the country, a number of private colleges, and two open universities: Ramkhamhaeng University, which offers both on-campus instruction and distance education, and Sukhothai Thammathirat Open University, which offers distance learning only.

Ramkhamhaeng is a large open admission university—probably the largest open university in the world—because over the course of a single year between 500,000 and 700,000 students register for classes at Ramkhamhaeng. With over half a million students, and some lower-division classes numbering more than 10,000 students—these on-campus classes being reached simultaneously through closed-circuit television—Ramkhamhaeng must be considered a world leader in education for developing countries.

The university, named for King Ramkhamhaeng the Great, warrior, monarch, and inventor of the Thai alphabet (1282 A.D. ; 1826 B.E.)—a kind of King Arthur-figure in Thai history—was established in 1971 through public demand to fill the diverse educational needs of the population not covered by Thailand's traditional universities.

Among the most basic of these diverse needs are provisions for recent high school graduates who did not pass the rigid entrance examinations with a sufficiently high score to enter the country's traditional universities, but who want an education just as much as those who did pass; young people who must work while attending college; and working adults who want to upgrade themselves on the job.

The establishment of Ramkhamhaeng University seems especially needful in terms of Thailand's efforts to move towards a full-fledged democratic society, one of the essential requirements of which is an educated population. And Thailand is still a developing country, thus human resource development is first importance. This development not only increases the quantity of trained manpower in response to national needs, it also improves the quality of life and work for people generally. Also, "education seems to breed education." Consequently every year more students in Thailand are seeking a university education, every year more students are enrolling at Ramkhamhaeng University; whereas in the West, student enrollment has been declining since 1971. Ramkhamhaeng is playing a major role in meeting the diverse educational **needs and wants** of the people of Thailand, and will continue to do so in the future.

Ramkhamhaeng is situated on a 120 acre site in the Hua Mark area of suburban Bangkok, adjacent to the Hua Mark Stadium. Because texts and final exams are stressed, only about 50,000 of the half-million enrolled students show up on campus for classes on a regular basis. Still, when we remember that a large university like the University of California at Berkeley has "only" 35,000 students, 50,000 may not seem such a small number.

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But with the on-campus student population increasing yearly, expansion is necessary. Thus the university has now opened a second campus on the Bangna-Trad Road in suburban Bangkok, to be known as the Patchimsawad-Suwanpasri campus. This new facility, intended for freshmen, will accommodate 30,000 students. It will provide not only classroom space, but also recreational compounds and library halls for the students.

The functioning of Ramkhamhaeng University falls under the two major headings of Administration and Teaching.

Administration

The University Council composed of highly qualified members both on and off campus are serving as a policy control of the university. The Rector is the chief administrator of the university. Working directly under the aegis of the Rector's Office are the Vice Rectors for Academic Affairs, Business Affairs, Administration, Students Affairs, Planning and Development, and Welfare and Finance.

There are a number of other functions that we may classify under the general rubric of Administration. There is the Computer Center, which is basically concerned with the huge task of processing incoming students and maintaining student grades and records. The Student Services and Welfare Office deals with student problems, not only personal counseling, but also disciplinary problems (students cheating on exams, etc.). There is also a Staff Development Center, which provides on-campus courses for teaching and non-teaching personnel alike. The essential task of the Research Center is course development.

Also included under Administration is the Library, a six-storey building containing 210,000 volumes, in Thai and foreign languages, and subscribing to more than 1,000 periodicals, from Thailand and around the world. The Office of Physical Plants include two campus bookstores, and such things as utilities, ground maintenance, food services, and the physical education facilities at Ramkhamhaeng playground.

Considering Ramkhamhaeng's huge student population, it is not surprising that it maintains its own printing press. Courses are based on textbooks, written by the teachers, which the university publishes at a very low cost. Some books are not written by the teachers, but, under the auspices of the university, translated by them from English into Thai. The implications of this are significant. It provides Thai students with a great body of Western books in their own language; thus the students are not required to read English on a highly advanced level in order to profit from these books. This is quite different from former colonies. Thailand was never colonized such as Morocco, Malaysia, and India where almost all higher education material is available only in French or English not the local language. This can be seen as another dimension of Ramkhamhaeng's effort to democratize education. Ramkhamhaeng publishes about 100 new titles a year, and, all in all, over three million books a year.

Teaching

The purposes of Ramkhamhaeng University, as with any university-level institution, are teaching-learning, research, and academic service to the community.

In terms of teaching, Ramkhamhaeng presently offers two kinds of degrees, Associate and Bachelor, but plans in the near future to begin offering Master of Arts and Master of Science degrees.

The Associate degree is offered in Law, Business Administration, Humanities (languages, history, philosophy, etc.), Education, Political Science, and Sciences (biology,

chemistry, physics, etc.). Plans for the future are two-year degrees in fields of a somewhat more vocational nature: e.g., Computer Programming and Home Economics. By offering the two-year Associate degree, Ramkhamhaeng provides what is in effect a community college among its various services to the community.

Bachelor degrees are offered in Law, Business Administration, Humanities, Education, Political Science, Science, and Economics.

Beginning next year, Master degrees will be offered in Economics. M.A. degrees in Humanities and Education will be offered within the next two or three years.

It is interesting to note that the most popular subject among the students is law. This is followed, in order, by business administration, political science, economics, education, humanities, and science. A shortage of funds has made it impossible to teach subjects such as engineering, nursing, medicine and some sciences. The university's budget is 400 million baht (about 17.5 million U.S. dollars) a year.

Ramkhamhaeng also offers "life-long education" for students without degree objectives. Some of these students take courses merely out of interest; others do so to upgrade themselves on their job.

Also under the heading of non-degree are mini-courses. These courses, often presented by a distinguished visiting teacher, are presented on a one-time basis, and often for, say, six weeks instead of the entire academic quarter. Or a teacher on campus might present a two-week course in business letter writing, with a certificate of accomplishment granted at the end of the course.

Presently Ramkhamhaeng has 800 full-time and 100 part-time teachers at the two Bangkok campuses. The university maintains nine Study Centers throughout the country; and at each, there are more than twenty teachers all of whom have either Bachelor or Master degrees.

Not only does Ramkhamhaeng try to get the best teachers available, it also helps its teachers develop their skills through various staff development programs. For instance, grants are available for selected teachers to study abroad for several months or even years for degree and non-degree programs before returning to the university to resume their duties. Also, the university has staff exchange programs with such American universities as Miami University, the University of Pittsburgh, and Southern Illinois University and so on.

The Staff Development Center provides in-service training in such fields as test writing, teaching at an open (rather than a traditional) university, writing individualized teaching materials, etc. There are other on-campus classes available to the faculty. For instance, several English classes, called "English for Staff," beginning through advanced, are offered every semester for the purpose of staff development.

But perhaps the most important item under the general topic of Teaching is the method of instruction used at Ramkhamhaeng, for both its on-campus and distance students. As we may suspect, providing education for over-half a million students requires a great deal of systemization and the use of technology.

Most open universities in the world provide only distance education; they are "universities without walls." But RU has a high wall. But again, Ramkhamhaeng provides both on-campus and distance education. And it does so through what we can call an "integrated teaching system." By "integrated" system, we mean that the education-systems provided for the on-campus and the distance learning students are coordinated in such a manner that these students are provided with essentially the same education.

The facilities used for on-campus instruction include textbooks, study guides, closed-circuit television, library, and laboratory. Distance learning instruction makes use of the

same textbooks and study guides, as well as radio, television, tapes, telephone tutorials, correspondence, school newspaper, as well as Study Centers.

There are a number of advantages to this integrated teaching system. The principal advantage, of course, is student convenience in that such a system is able to address a greater variety of student needs. Many students want to and are able to attend lectures on a regular basis, or on an irregular basis, if their outside work-schedules so dictate. But many students, because they have full-time jobs or live at too great a distance from the university, are not able to attend lectures; and adult students often do not need to attend lectures as their motivation and capabilities tend to be more developed than are those of younger students.

This integrated system is able to maximize equality of treatment of the students, and similarity of standards. In short, what students may miss by not attending lectures, they can get through distance-learning communications. So the distance student has programmed instructional books, television and radio programs, and Study Centres for tutorials. Some of these things are available to the on-campus student, too, but if a student attends lectures all day, it is not likely that he or she will have time also for televised and radio broadcasted lessons. So, by employing differing methods to present the same basic materials to both on-campus and distance students, the integrated system is better able to meet the diversity of student needs.

The instructional process benefits, too, because the teachers are able to meet many of the students. And as the teachers are the ones who write the distance-learning instructional materials, knowing student capabilities, and being able to test the materials on students, is of primary importance.

The integrated teaching system also maximizes cost-savings in the production and use of materials. That is, to produce materials for distance students only, or on-campus students only, would be more costly than to produce materials for both kinds of students, because production costs are covered to a great extent by student purchases (at low prices); and we can keep these costs low, and hence student purchase-price low, by producing and selling in greater volumes.

But again, the basic value of this integrated system is that it better meets the diversity of students needs, and does so in an equitable manner.

Research

The three functions of a university, teaching, research, and academic service to the community, have a symbiotic relationship. For instance, research—both practical and pure—enhances and focuses the teaching process, especially on the upper-division and graduate school levels. Research can also provide, or at least suggest, solutions to specific problems in the community; which in turn is only one of many possible services to the community.

We can put research activity at Ramkhamhaeng into three categories; institutional research, action research, and pure research.

Institutional research, carried on mainly by the Development Center, includes not only the creation of courses and texts for distance and on-campus learning, and research into new open university teaching methods, but also the study of methods of the in-class teaching of Thai students, who have their own peculiar personalities, language abilities, and so on.

Under the category action or practical research we include any research projects aimed directly at some specific national problem. For instance, a research paper on streamlining the dairy-cooperative system in Thailand would come under this category. Such projects are often initiated by government requests.

Pure research includes work done without a specific or practical aim, but rather with the general purpose of advancing knowledge in a particular area. Inventing a new kind of synthetic material, calculation the distance to a star, discovering Pali roots for certain Thai words; such things are a matter of pure research. But of course, sooner or later, it is often found that such discoveries have specific applications.

Academic Service To The Community

In addition to teaching and research, the third essential function of a university is academic service to the community. Academic service to the community would include not only the practical research mentioned above, but also advisory tasks for business and government, the presentation of lectures and workshops, and other activities.

But service to the community is also provided by Ramkhamhaeng's active student body. Rural development is one area in which the students have, on a voluntary basis, done impressive work, helping to build schools, construct wells, and other things pertinent to a developing, rural nation such as Thailand.

So Ramkhamhaeng University, with its student population of half a million, its health, counseling, food, and recreational services, its IBM center and broadcasting facilities, a campus newspaper that is also a nation-wide newspaper, and even a major translating service, is something of a small city unto itself. And with the recent opening of its second Bangkok campus, it is a university-city with its own suburb. Ramkhamhaeng, an institution for **instruction**—both distance and on-campus instruction—**research**, not only in the usual fields of research but also the important topic of open-university instruction, and **community service**, is an important factor in enhancing the manpower base that Thailand, as a rapidly developing country, needs. We may, at this point, say that Ramkhamhaeng as an open admission university with optional classroom attendance serves as a leader of open higher education institution as well as a nation-wide developing society agent.

Conclusion

We all agree that the distance learning system is an innovation that will facilitate the democratization of higher education in a mass society. But we at Ramkhamhaeng would like to recommend that integrated teaching system—distance and on campus instruction is another innovation that will facilitate more. It seems hard and difficult to put it into practise.

But in fact it has been with us as a challenge to be accepted and a mission to be accomplished by Ramkhamhaeng University for a dozen of years now.



References

- A.Raksasataya. "Ramkhamhaeng : The Open-Door University Reexamined," in **The Growth of Southeast Asian Universities : Expansion versus Consolidation**. Proceedings of the workshop held in Chiang Mai, Thailand : 29 November-2 December 1973, edited by Amnuay Tapingkae, Regional Institute of Higher Education and Development, Singapore, April 1977. pp. 142-159.
- B.Virasai, "Ramkhamhaeng University : A Case in Institution Building," Newsletter, 4, 3 (December, 1972). **the Association of Southeast Asian Institutions of Higher Learning**, Bangkok, pp. 131-143.
- P.Noisaengsri, and Leuschel D.A. "An English Placement Test for An Open Admissions University" Paper presented at the Fifteenth Regional Seminar, SEAMEO Regional Language Centre, Singapore, April 21-25, 1980.
- P.Noisaengsri, and U. Korntaptim. "Ramkhamhaeng University Experiences in Extension Programmes." Paper presented at the Seminar-Workshop on University Extension and Community Outreach, Prince of Songkla University, Pattani, Thailand and Universiti Pertanian Malaysia, June 6-10, 1983.
- U.Warotamasikhhadit, and Leuschel D.A. "Open Education in Thailand" **Bulletin of the Unesco Regional Office for Education in Asia and Oceania**, No. 19, (June, 1978,) pp. 95-104.
- W.Srisa-an "Country Report : Education Development in Thailand," in **The Growth of Southeast Asian Universities : Expansion versus Consolidation**. Proceedings of the workshop held in Chiang Mai, Thailand : 29 November - 2 December 1973, edited by Amnuay Tapingkae, Regional Institute of Higher Education and Development, Singapore, April, 1974, pp. 72-79.

*Supporting Paper VIII***RAMKHAMHAENG UNIVERSITY : AN OVERVIEW*****1. Introduction**

The Establishment of Ramkhamhaeng University

In the mid twentieth century the number of students who were unable to pass the entrance to the national universities was increasing, due to the limitation of seats. To help the government solve the problem, in 1969, a group of representatives led by the late Mr. Pramual Kullamart proposed an act to establish a new university, Ramkhamhaeng. This proposed act passed the House of Representatives, and on February 26, 1971, the Ramkhamhaeng University Act was granted by his Majesty the King and was published in the Royal Gazette, volume 88, part 24, dated March 2, 1971.

Consequently, Ramkhamhaeng University was established and began to work in the academic year of 1971. By that time, there were 4 faculties: Law, Humanities, Education, and Business Administration. Other offices were the Office of the Rector and Office of Technical Services and Evaluative Testing (Registrar and Computer Center). In 1973, three other faculties were founded: Sciences, Political Science, and Economics. Later, in 1974, the Central Library which serves as the educational and research center was also added to the University.

Number 5 of the Act of 1971 said that.... "Ramkhamhaeng University is an academic and research institution, its main policy is an open admission. Its aim is to provide mass education, advanced vocational studies, carry out research for the promotion of higher education and vocational studies, and to preserve our (Thai) culture..." Owing to the Act, this institution is designed as an open admission university, open to all persons who would like to go on with their education. However, at the early years of its establishment, the University tried to cope with only the problem of the high school student who failed to pass the universities' entrance examination. Subsequently, students with a high school certificate or equivalent were to be admitted without having to take any entrance examination.

There are a great number of applicants at Ramkhamhaeng University each year. The number of students increased from 37,198 in the academic year of 1971 to 572,181 in 1982 and to 84,879 in 1983. The government realized the problem of classrooms. At the beginning of the establishment of Ramkhamhaeng, the Cabinet allowed the University to use

*Ramkhamhaeng University would like to acknowledge the contribution of the University Research Sub-Committee in collecting and comprising the data presented in this paper. This sub-committee is consisted of the following members:

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"The International Trade Fair Exhibition" site at Hua Mark as a permanent campus. A year later, the Cabinet also granted 120 acres of land to the University to build more classrooms. Since 1974, there have been many classroom lecture buildings built. However, the tremendous increase in the number of students still is a problem in classroom accommodations for the University. To solve this problem, in 1977, the University Council announced a new regulation that there would be no class meetings for the first-year students, and aimed at facilitating radio and television as teaching media to compensate for no class meetings. Besides the various forms of teaching media, the University has also initiated a visiting lecture at a center which is situated in a provincial college or university. There were 16 centers in 1977; the name of the project has been changed to "Regional Study Centers". By the second semester of 1976, the lectures were cancelled in six of the centers. This was the beginning of using video cassettes in the study centers to reinforce the freshman lectures. After the three cancellations in 1977, the university proceeded to develop and expand classrooms. Finally, in 1978 there was once again the ability to give the lecture to the freshman that first originated on Sundays. Later 3 more days were added; Tuesday, Thursday, and Saturday-along with a senior year. There were a total of 75 classrooms which were composed of 41 laboratories and 34 lecturerooms that could hold 200 students. Two hundred to five hundred students could fit in six of the classrooms. Twenty-five classes would hold 1,000 to 2,000 students. Also, closed-circuit television was used in 15 halls. Moreover, in 1979 the university presented all its problems to the government and asked to build up a second campus. The government endorsed the plan on 21 August, 1979, "Phatchimsawat-Suwanaphasri Campus."

After a decade, Ramkhamhaeng developed from an open admission university to an open university and handles both on campus and off campus students. By now, there have been 58,755 graduates from the university within eight academic years.

2. The University's Organization

At the present, Ramkhamhaeng University consists of 7 Faculties' and three official divisions. They are administered by the Rector, Office of the Rector and are under the control of the University Council and the Advisory Board which control the university's policy.

3. Faculties and Departments

Ramkhamhaeng University offers bachelor degrees as follows:

3.1 Faculty of Law.

The departmental degree requirements

General Education	31	Credit hours
Law Courses (Compulsory)	107	"
Electives	6	"
Total credits' requirements	144	"

3.2 Faculty of Business Administration

Area of concentration

3.2.1 General Management

3.2.2 Money and Banking

3.2.3 Marketing

3.2.4 Accounting

3.2.5 Advertising and Mass Communication

3.2.6 Service Industry

The departmental degree requirements

General Education	40	Credit hours
Core courses in Business	48	"
Courses in each area of concentration	47	"
Electives	12	"
Total	147	"

A student who is majoring in accounting must pass training courses with accounting examiners who are certified by an accounting licensed auditor with a minimum of 500 hours in order to meet the requirement.

3.3 Faculty of Humanities

Area of concentration

- 3.3.1 English
- 3.3.2 Thai
- 3.3.3 History
- 3.3.4 Library Science
- 3.3.5 French
- 3.3.6 German

The departmental degree requirements

General Education	57	Credit hours
Major Courses	51	"
Minor Courses	18	"
Electives	18	"
Total	144	"

3.4 Faculty of Education

Area of concentration

- 3.4.1 Education (B.A. in Education)
- 3.4.2 Psychology } B.Sc.
- 3.4.3 Geography }

In each area of concentration, various majors are devided.

The departmental degree requirements

General requirement courses	42-58	Credit hours
Professional Courses	34-38	"
Major Courses	36-51	"
Minor Courses	0-18	"
Electives	5-9	"
Total	144-147	"

3.5 Faculty of Sciences

Area of concentration

- 3.5.1 Mathematics
- 3.5.2 Statistics
- 3.5.3 Chemistry
- 3.5.4 Physics
- 3.5.5 Biology

The departmental degree requirements		
General Education requirement courses	53-54	Credit hours
Major courses	51-77	"
Minor Courses	0-18	"
Electives	12-18	"
Total	140-145	"

3.6 Faculty of Political Science

Area of concentration

3.6.1 Politics and government (Plan A)

3.6.2 Foreign Relations (Plan B)

3.6.3 Public Administration (Plan C)

The departmental degree requirement

General Education	52-64	Credit hours
Major Courses	60	"
Minor Courses	12-18	"
Electives	9-15	"
Total	145	

3.7 Faculty of Economics

Area of concentration

3.7.1 Economic Theory

3.7.2 Industrial Economics

3.7.3 Monetary Economics

3.7.4 Fiscal Economics

3.7.5 International Economics

3.7.6 Development Economics

3.7.7 Quantitative Economics

3.7.8 Agricultural Economics

3.7.9 Economic History

3.7.10 Human Resources Economics

The departmental degree requirements

General Education	48	Credit hours
Economics (required courses)	27	"
Major Courses	39	"
Minor and elective courses	0-30	"
Total	144	"

4. The University Budget

Besides generating its own income, Ramkhamhaeng University receives financial support from the government. The University's income in each year comes from tuition, registration, general fees, and interest on bonds. Altogether this income is about 43.15 per cent of the University's budget. The other 56.81 percent of its budget comes from the government. The University's budget is spent in running the university.

5. University Staff

University Staff can be classified into three categories, lecturer, tutor, and office worker. According to the figure of 1983-1984. There are 3,982 staff, detailed as follows:

Bureau/faculties	total	lecturers	tutors	office workers	temporary staff	university budget
Rector's office	1,433	1	32	186	150	1,061
Admission Office Building	388	-	71	81	23	163
Library	317	-	44	78	26	169
Faculty of Law	268	78	12	30	39	109
Faculty of Business Ad.	181	71	8	36	18	48
Faculty of Humanities	237	137	3	28	23	46
Political Sciences	163	50	5	22	22	64
Sciences	310	117	7	33	39	114
Education	368	229	8	38	48	44
Economics	185	67	8	19	20	71
RU Campus (at Bangna-Trad)	182	-	16	38	67	61
Total	3,982	750	214	590	478	1,950

The number of lecturers classified by degrees and faculties.

Degree	Bachelor	Master	Doctorate	Total
Law	43	23	14	80
Business Ad.	4	62	1	67
Humanities	6	102	21	129
Education	59	136	20	215
Sciences	7	94	17	118
Political Sciences	4	35	8	47
Economics	1	58	6	65
Total	124	510	85	721

Professor	4
Associate Professor	175
Assistant Professor	288
Instructors	283
Total	750

6. Facilities for Teaching-Learning Procedures

Ramkhamhaeng University is an open-admission institute where a great number of students regularly come to classes, whether on campus or at regional study centres, or study at home through mass media and textbooks. The provision of services for teaching-learning procedures, therefore is quite a necessity. Without the efficient teaching-learning services, the university's objectives cannot reach fulfilment. To carry out this task, an office responsible for facilitating teaching-learning activities was set up and named as the Admissions and Records Office. The office mainly serves the academic staff and students by using computers to collect and to provide figures and data. All new applicants for admission must go through this office as well as regular registrations of the already enrolled students in each semester. Issuing of a student identification number, drop-add courses, transcript services and graduation are all activities provided by the Admissions and Records Office. Besides these, the office is responsible for arranging the times and rooms for lectures, examinations, correcting of exam papers, printing exam results and presenting analyses of the examination questions. The following are the details of each specified task of the Admissions and Records Office.

6.1 During June Admissions, the university will admit qualified applicants who can either apply directly on campus or by post. The applicants must possess one of the following qualifications : a civil service rank of grade 2 with a secondary school certificate. The applicants who have already received an associate degree of a degree will be automatically exempted from taking a full requirement of 144-145 credits. They can have the credits of the previous degree transferred, up to a maximum of 72. Statistically, since the University began operations in 1971 the 1979 students enrollment figures were the highest, (117,049) and the lowest, (8,726) in 1972.

6.2 Registration the students must follow what has been stated in the current regulations and schedule of each semester. They can either come in person or have an entrusted person enrol them on campus during the announced period. They can also register by postion a draft which covers all fees required by the university, payable directly to the university bursar. The bursar then will refer to the Admissions and Records office for posting receipts back to the students.

6.3 Student Code Number. This number is composed of 9 figures in 3 groups : the first 3 figures indicate year and faculty; 5 figures in the second group indicate student's order in the faculty; 1 figure for the third group is the check digit.

After having been in a particular faculty for 2 semesters, the student can transfer to another faculty without changing the code number but an extra set of 4 figures will be added on the student's identification card. The first two figures identifies the new faculty, the last two ones identifies his or her major.

6.4 Drop-Add Courses. Normally, once the student has already registered, he or she cannot make any further alteration, unless a course is cancelled. In case of the cancellation, the student can register for an alternative course or apply for a refund.

6.5 Lecturing. The arrangement for delivering lectures can be classified in 3 categories:

6.5.1 Lectures on campus from 7.30 to 19.20 hs., Mondays through Saturdays.

6.5.2 Lectures by broadcasting through a radio and television network all over the country.

6.6 Brief lectures at the 16 regional study centres

As a matter of fact, a tremendous number of students attending classes on campus causes the problem of overcrowded rooms and spaces. It is expected that the problem will be solved after the opening of the second campus. Those students who live far in the country may have a problem of receiving radio and television broadcasts. To relieve this problem the lectures are recorded on video tapes and distributed to the regional study centres for the students who have the problem of receiving the programmes or cannot afford a television set. However, in such courses for which a video tape has not been made, the local lecturers are invited to give their lectures at the centres.

6.7 Provision of Space and Examinations. A computer takes the major role in arranging space for teaching-learning activities as well as for examinations. For a single room in which several subjects are to be examined at one, the computer will be of much help in alternating subject papers between roles and seats. Each subject is identified by colours. In some courses the number of enrollment exceeds the number of spaces and seats available on campus, so the cooperation of schools within convenient transportation distance of the university is requested. The proctors are mainly the school instructors but they are under the university staff members' supervision.

6.8 Grading of examination papers.

Practically, to make possible quick results, exam papers to an objective type are employed in basic courses and assessed by computer. The computer also provides statistical item analysis for the teaching staff to improve the efficiency of examination papers. For the papers of the correspondence course one must do hand grading.

6.9 Grade reportings, Assessment and Evaluation

Grade reportings are published 15-45 days after the termination of the examination at the Faculty which offers the courses. The grades are assessed as follow : G = Good = 4.00, P = Pass = 2.25 and F = Fail = 0. On transcripts, the failing grade is excluded from the accumulative average. Application for transcripts can be made throughout the year.

6.10 Graduation and nomination for degree awarding

Students expecting to graduate must apply for their degree within their last semester. Each Faculty will nominate completing students to the university council for granting of a degree.

7. Book Service and Other Media: Provision of Textbooks and Other Instructional Materials.

7.1 Textbooks and Lecture Tapes

Since the Enabling Act, Article 5, specifies that Ramkhamhaeng University will be an academic and research institution of an "open admission" model. There is no obligation that students must regularly attend classes. On the other hand, they can study on their own through the provided textbooks. The university, thus, is very conscious of this essential factor. In 1971, the university started with 96 courses for its textbook publication programme and the number has been increasing every academic year. At the present, the publications cover 843 courses of the total of 1,229 courses offered. Those university publications are sold at an extremely low price. In addition, the university provides a postal service for the students who would like to order books or to make reservation for textbook still being printed.

Besides textbook publication the unit launched a new service for taped lectures for the students in rural areas. This service was started during the second semester of 1983, and is under the care of the Radio and Television for Educational Purposes Section, originally set up for preparing lecture scripts for broadcasting. The lecture tapes are mainly for first-year students (13 courses) while second-third-and-fourth-year students are provided with tapes for eleven courses.

7.2 Lectures on Radio and Television

During the first semester of 1977 another further step was taken, that of a programme of broadcasting lectures through Radio Thailand. The trial took 6 days and 30 hours between June 1-6. The programme including brief lectures and executive administrators' interviews were broadcast 5 hours/days. The official broadcasting commenced on June 7, 1977. The programme offered first-year courses. During examination and vacation periods, the programme is modified to be an examination tutorial together with a documentary special named "Ramkhamhaeng Preview."

In addition, on weekdays the broadcasts are on Postal Radio (1,00 KHz) to serve first-year students in 26 courses. And during weekends, between 21.30-23.30 p.m. through the same radio station at 1,410 KHz, the programme is a brief of eleven first-year courses together with university news once a week. There is one hour daily programme through Radio Thailand (27 regional stations) for review of 29 first-year courses. There is also

broadcasting programme over 14 military radio stations, one hour daily, to serve 29 first-year courses.

The radio broadcasting programme has subsequently been extended so a further 70 courses offered for the students of later years.

With respect to television broadcasting, in 1977 the university cooperating with T.V. channel 9 began broadcasting ten first-year courses on weekdays. In the following semesters 5 more courses were added. Furthermore, in 1980, the university gained the cooperation of T.V. channel 7 to broadcast 32 courses. Consequently, Ramkhamhaeng University offers broadcast lectures on two T.V. stations, channels 7 and 9; 20 over channel 7, and 5 over channel 9.

8. Student Service

In the academic year 1983, the total student enrollment was 640,940 with approximately 40,000 students regularly attending the lectures on campus. Nevertheless, the students services are aimed to cover both those who come to the university and those who cannot. The university student services are as follow:

8.1 Central Library service

The service for academic research information as well as general knowledge is supplied through books, textbooks, journals, documents, other printed matter, and audio-visual materials.

8.2 Textbook posting service

The textbook unit has also a service allowing up-country students to order their textbooks by post. Students must send their student identification number, names of the texts, handbooks, or other supplementary publications together with cheque, money order or postal order in which the price and the postage are included, to the university textbooks and instructional materials unit.

8.3 Study Guidance Service

This service assists the students to understand their capability, indicating a direction for study, matriculation, majors and minors, transferring, and includes professional guidance. There is a service on campus as well as through the mail for distant students.

8.4 Counselling Service

The service is offered by the staff of the Psychology Department. It concentrates on psychological problems of the individual student, hopefully enabling the student to find relief.

8.5 Scholarships and Grants

Since 1975, the university has spent not less than 1 per cent of its own income on giving grants to students. The grants are of two categories: grants for scholarly students, and grants for hardship. The University also offers a tuition waiver and fees payments for the students whose have been 75 per cent as out of 45 credits and upwards in a semester. In addition there are grants from other sources outside the university. In the period 1978-1982. Ramkhamhaeng University had 181 outside grants. (see Table 13)

8.6 Health and Sanitation Services

The university provides medical and first aid services, between 8.30 - 11.45 hs. and 13.00 - 16.00 hs. on weekdays, and between 9.00 - 11.45 hs. and 13.00 - 16.00 hs. on weekends.

8.7 ROTC Training Service

The university cooperates with the Territorial Defense Department to provide training courses both for the beginners and for the continuing trainees.

8.8 Sport Services

The university actually supports 16 sports clubs in which 19 types of sports are included. There are also several sports instruments on loan to students.

8.9 Accommodation Services

The majority of the students are nonresidents of Bangkok, so that, the university makes accommodation information available for out-of-town students to make their decisions. During the examination period, the university also finds cheap temporary places for students from the country. Reservations must be made one week before the beginning of the examinations.

8.10 Job Services

The university gives out job information as well as selects graduates for employers at their request.

8.11 Half-price train coupon booklet Service

The service is provided for the students whose homes are not in Bangkok. They can use their train coupons only during the university vacation.

8.12 Fare subsidy Service

The service is provided for students who regularly travel by public transport to and from the university. The students qualified for the service must live not more than 100 kilometres from Bangkok. The reduction is 30 per cent.

8.13 Miscellaneous Services

Besides the above mentioned facilities, the university also provides lecture recordings, university news, typewriter and stencil machines for loan, lost and found, buses for off-campus activities, and legal consultation

9. Students' Activities

9.1 University Policy

Fundamentally, the university's goal is to achieve academic excellence. However, Student's activities are considered, a crucial means towards redisation of this goal and also towards the student's way of living and self development. Hence, the university honestly supports the student's activities which are education oriented, and towards life enrichment, enhancement of health and strength, implanting of ethics, and development of personnel. In fact, the university widely encourages the student's activity on a democratic basis.

The students plan their own activities according to their expertise and interest. The university supplies them the financial support, instruments, places, and other services to facilitate their activities. The students plan and work under the supervision of their lecturers and professors who act as their supervisors. In terms of place and space the university provides them a five-storey building, as the permanent activity centre. In addition, the university annually grants the students financial support for their activities.

9.2 Types of Activity

The university encourage students to participate in extracurricular activities, sports, art and culture, and public service to fulfill the university's commitment. Accordingly there are 4 types of activities as follows :

9.2.1 Educational Activities

There are 24 clubs whose projects are academic exhibitions, tutoring and handing out brief lecture sheets, social integration activities between undergraduates and graduates, and training in sports for youngsters, English conversation practice, job training for use abroad, new students orientation and the welcome for new friends, and seminars on academic aspects.

9.2.2 Art and Cultural Activities

There are 12 clubs involved in cooperating with Chiang-Mai University on photograph exhibitions, speech and debate with Thammasat University, Thai music shows, Classical Thai drama, and exhibitions on Buddhism.

9.2.3 Public Service Activities

There are 10 clubs active in voluntary camps for rural development which include permanent concrete stool buildings with tables and chairs for pupils, a centre for infant development, water tanks, wells, lavatories, all-purpose buildings, a medical co-op, first-aid training, a public-meeting house, a public library, and an all-purpose house for a Buddhist temple.

9.2.4 Sports Activities

There are 16 clubs whose projects are university sport, tournaments, university rugby, university football, All-Thailand badminton, Bangkok Invitation, volleyball, All-Thailand Shooting Clubs, All-Thailand table tennis, All-Thailand tennis, All Thailand inter-boxing and R.U.Judo.

9.3 Administering Students' Activities

The administration is divided into 2 parts, Student Council and Student Body. The students' activity administration is the responsibility of the Vice Rector for Student Affairs, served by the student services unit.

9.3.1 Student Council

The council is composed of student council members representing the parties within the university, these parties being registered with the university. By the university regulations, the members of the council must come from students of the four undergraduate years, 16, members from each; therefore, the total member of the council members is 64.

9.3.2 Student Body

The Student Body is the centre of all student activities. The main roles of the organization are to project student benefits, to serve students in various aspects, as with tutoring, preparing some brief lecture note sheets, supporting student clubs, and encouraging social activities.

The Student Body consists of the student body committee and committee of student clubs. The number of the student body committee members must not exceed 12

9.3.3 Student Clubs

A student club can be set up with a minimum of 300 members from at least four Faculties. The group presents their names through the student body committee and finally to the student council. After passing the council, university permission will be granted. However, clubs may be dissolved by the Rector's order. All club activities must be overseen by the student body committee and under the assistance and supervision of the club supervisors who are appointed by the university.

Ramkhamhaeng University, which was established according to Act in 1971, is an academic and research institution as an open university concentrating on providing higher academic and professional education, and promoting and preserving cultural activities. It is open for all whose qualifications meet the eligibility requirement for the bachelor programme with no entrance examination and in unlimited numbers.

This concludes the overview of Ramkhamhaeng University. It is easy to see by its history, the diverse elements it contains, its large size and individualized delivery systems, that it indeed is truly a "management challenge."



EDUCATION ABROAD TV SCHOOL FOR 500,000 THAIS....*

Fifteen minutes before his political science class begins, Orlan Kongparsuk leaves the table under a thatched roof where he's been studying with friends, enters a building and climbs five stories to a vast 2,000-seat hall to get close to one of 20 television monitors that are dangling from the ceiling. On the ground floor the teacher will lecture to another packed hall of 2,000 while his televised performance is screened on each floor above him.

With classes numbering more than 10,000 and a total student body of 500,000, Thailand's Ramkhamhaeng University is the world's largest, according to Dr. Muhammad Selim, a regional education specialist with the United Nations Educational, Scientific and Cultural Organization. More important, it is an education world leader among the developing countries, using television and radio and publishing its own textbooks to reach its students.

The university was founded by the Thai Government in 1971 to provide cheap higher education to Thai students unable to get into more costly and competitive universities such as Chulalongkorn, the Harvard of Thailand, also a state-run institution. Ramkhamhaeng drew 37,000 to its first class.

For the thousands of female students, wearing traditional blue skirts and white blouses, and male ones like Mr. Orlan seeking to rise from the working or lower-middle class into the professional class, Ramkhamhaeng offers a chance that was denied their parents. "When you say you graduated from Ram, and you go for a job," Mr. Orlan said, "the employer knows you helped yourself."

About 70 percent of the 100,000 freshmen who started study at the Bangkok-based university this year will drop out and never graduate, according to Pat Noisaengsri, the vice rector. "Our graduates are self-confident and work hard," he said in a recent interview at his office. "The student has to help himself to graduate. Nobody tells you what to do. It's self-discipline."

Under the open-university system at Ramkhamhaeng, anyone with a high school degree or career civilservice job can register for a degree course. Students are not required to attend lectures, and only during registration and final exams must students actually be at the campus. Grades are based almost exclusively on one final exam per course; if at the end of eight years students have not amassed the required 144 credits, they can transfer half of what they have and start over again. Fees are 18 baht per credit, or about 80 cents at the current exchange rate of 23 baht to a dollar.

Though the main campus is in Bangkok, a system of 16 study centers around the country and a chain of radio and television stations make lectures recorded at a small studio in Bangkok available to hundreds of thousands of students enrolled in degree programs. Courses are based on textbooks that are written by the 850 teachers and published at very low cost by the university.

*Ben Barber, Free Writer, Bangkok, Thailand

Ramkhamhaeng publishes about 100 new Thai titles per month, which in 1980 totaled more than three million books. The sudden availability of a vast literature in the Thai language may be having a secondary effect on this highly literate Buddhist nation of 50 million whose people do not readily learn monotonal, Western languages. Increasingly one finds students familiar with Descartes and Newton who do all their reading in Thai.

Because the university's emphasis is on texts and final exams, only about 50,000 of the students actually show up on campus for classes, according to Sukhum Nualskul, the rector. Dr. Sukhum was elected to his position, the rough equivalent of an American university president, by students, lecturers and administrators ago after a stint as dean of the faculty of political science.

Though computer-graded tests are used because of the huge number of students, the elected student association leader, Wantert Kittitagul, 23, voiced a common complaint that results are sometimes not in before it's time to register for the next course. But despite the complaints, and the flooding that often closes the lowlying 75-acre campus, students continue to arrive on the hundreds of blue and beige city buses that make the main entrance to the campus look like a bus terminal.

The curriculum adopted for the school is patterned on the American liberal education—two years of general study followed by two years of concentration in the major field, leading to a bachelor of arts or science. The most popular subject is law, followed by business administration, political science, economics, education, the humanities and science. A shortage of funds has made it impossible to teach such critical subjects as engineering, nursing, medicine and some sciences, said Dr. Pat. The annual budget is about \$17.5 million.

Many students select political and social sciences because the courses are easier than hard science, Dr. Pat said, but long-range government plans call for more science and medicine.

A major problem looming on Thailand's horizon now that Ramkhamhaeng and a second open University with 200,000 students, Sukhothai Thamathairat, are offering mass education, is whether graduates will be able to find jobs. Currently, 30 to 40 percent of Ramkhamhaeng's graduates cannot find work, and Thailand is looking apprehensively at countries such as Egypt, where widespread public education produced hundreds of thousands of trained young people who must work for a dollar a day as clerks in hotels or government offices doing jobs far beneath their capabilities and interests.

Many in Thailand may find government jobs. But as neighboring Malaysia discovered, absorbing an annual river of new graduates into the public sector has a limit, and Malaysian university graduates were told this year to go out on their own and find jobs in private industry. Thailand has a respectable adult literacy rate of 86 percent, considering that annual income is under \$800 per person; and it is just beginning to feel the burden of an overabundance of university graduates who cannot find jobs.

"There's a mismatch between university graduates and employment in many developing countries," said Dr. Selim of Unesco. "There is a philosophical question as to whether higher education is meant for job training or to fulfill the social demand for it. Anyhow, for those without jobs the future is not sealed. One day they may have them." In keeping with the democratization of education that is its goal, Ramkhamhaeng is offering non-degree courses for those with full-time jobs or those wishing career or intellectual enrichment.

TEACHING A CAST OF THOUSANDS*

Fifteen minutes before his political science class begins, Orlan Kongparsuk leaves the table under a thatched roof where he'd been studying with friends and hurries to find a seat close to one of the 20 television monitors, dangling from the ceiling in a vast hall seating 2,000. Five storeys below him, the teacher will lecture to another packed hall of 2,000 while his televised performance is screened on each floor above him.

With classes numbering over 10,000 students, Thailand's Ramkhamhaeng University has become a **world leader in education for developing countries**. It uses television and radio, and publishes textbooks to reach its students.

At what "may well be the world's largest university" according to regional education specialist Dr. Muhammad Selim of the United Nations Education, Scientific and Cultural Organization (UNESCO), 500,000 students are enrolled. Although they squint at televisions, cram giant lecture halls, sweat without air conditioning and lack the personal encouragement students get in smaller colleges, "they're getting education they might otherwise be denied", said Dr. Selim.

Thirteen years ago the university was founded to provide cheap higher education to Thai students unable to get into more costly and competitive universities such as Chulalongkorn, the Harvard of Thailand. Ramkhamhaeng drew 37,000 to its first class in 1971 and has now become the world's largest open university. From August 13 to 17, an international conference on open higher education will be held in Bangkok and some of the lessons learned in Thailand will be communicated to educators from over 30 countries.

For the thousands of Thai girl students wearing traditional blue skirts and white blouses, and the Thai boys like Orlan seeking to rise from the working or lower middle class into the professional class, Ramkhamhaeng offers a chance that was denied their parents. (Thais are known by first names.)

"When you say you graduated from Ram (the Thai nickname for the university) and you go for a job," said Orlan, "the employer knows you helped yourself".

About 70 per cent of the 100,000 freshmen who started study at the Bangkok-based university in 1984 will drop out and never graduate according to Vice-Rector Pat Noisaengsri. "The students have to help themselves to graduate. Nobody tells you what to do. It's self-discipline. Ramkhamhaeng is easy to get into but not easy to get out with a degree."

Anyone with high school degree or career civil service employees can register for a degree course. Students are not required to attend lectures and only during registration and final exams must they be at the campus. Grades are based almost exclusively on one final exam per course. If at the end of eight years, students have not amassed the required 144 credits, they can transfer half of what they have and start over again. Fees are 18 Baht (one US \$ = 23 Baht) per credit.

Through a system of 16 study centres around the country plus a chain of radio and television stations, lectures recorded at a small studio in Bangkok are available to hundreds of thousands of students enrolled in degree courses. Courses are based on textbooks, written by the 850 teachers and published at very low cost by the university.

*Ben Barber, Free Writer, Bangkok, Thailand

In a remarkable effort to produce texts and reference material in the Thai language, Ramkhamhaeng is publishing about 100 new titles per month - over three million books in 1980 - so that those who are unable to afford the time and expense of learning English can receive higher education.

"We require that when lecturers open a new course, a textbook must be available in Thai," said Pat. If over 1,000 students sign up for a course given three times in a year, that adds up to a minimum order of 3,000 which justifies publishing a new general text handbook of structured learning materials and supplementary books."

The sudden availability of a vast and wide literature in Thai language may be having a profound secondary effect on this highly literate Buddhist nation of 50 million which was never colonized and whose people do not readily learn monotonal, Western languages. Increasingly, one finds students familiar with Descartes and Newton who do all their reading in Thai. It's quite a change from former colonies such as Morocco, Malaysia and India where almost all higher educational materials are still available only in French or English - not the local language.

Because texts and final exams are emphasized, only about 50,000 of the half-million enrolled students actually show up on campus for classes says Rector Sukhum Nualskul. He was elected to his job by students, lecturers and administrators (each has a third of the total vote), about 15 months ago after a stint as dean of the Faculty of Political Science.

In a part of the world where students have brought down governments, led revolutions and often inspired rightwing backlashes, the 41-year-old leader of Ramkhamhaeng seems able to guide volatile student energy into constructive educational goals.

"Do not be afraid of the activists", he said. "If you have a clean hand, face them. Mostly they went on strike over political issues or when they suspected there was administrative corruption at the university".

The elected student leader Wanlert Kittitagul, 23, who considers the Rector "a pretty good guy" described the political goals of Ramkhamhaeng students today as "wanting to know what's going on in Sukhum's office - is there corruption?"

Wanlert also criticized the university because "every year a fan falls down from the ceiling and kills or maims a student or two.

"And sometimes the television screens are too high or too few so students must look straight up or cannot see the screen. Especially in accounting classes, where these are diagrams on blackboards, it's hard to see the television".

Though computers grade many exams, because there are sometimes over 20,000 pages of test answers to grade following finals, a common complaint is that results are sometimes not in before it is time to register for the next course. Students with questions for the teacher must send them up in written form to get an answer during class time or they may contact the teacher during office hours. This may satisfy curious and outgoing students but many of them, afflicted with the shyness that is a Thai hallmark, end up unable to contact teachers and lacking any sense of personal contact or relationship.

The curriculum adopted for the school is basically patterned on the American liberal education - two years of wide study followed by two years of concentration in the major field - leading to a Bachelor of Arts or Science. The most popular subject is law, followed by business administration, political science, economics, education, humanities and science. A shortage of funds had made it impossible to teach important and needed subjects such as engineering, nursing, medicine and some sciences, said Dr. Pat. The budget is 400 million baht per year.

Many students select political and social sciences because the courses are easier than hard science, said Pat, but long range government plans for more science and medicine in the future.

A major problem looming on Thailand's horizon now that Ramkhamhaeng, and a second open university with 200,000 students, Sukhothai Thamathirath, are offering mass education, is whether graduates will find jobs.

In Egypt, for example, massive public education produced hundreds of thousands of trained young people who must work for a dollar a day as clerks in hotels or government offices doing jobs far beneath their capabilities and interests.

"The question of underutilization after graduation is not our problem" said Pat. "Our job is to produce a qualified population and it's the government's responsibility to provide the jobs."

Many find government jobs. But as neighbouring Malaysia discovered, absorbing an annual river of new graduates into the public sector has a limit and Malaysian graduates were told this year to go out and find jobs in private industry, on their own. Thailand, with a respectable adult literacy rate of 86 per cent (for a country where annual income is under \$800 person) is just beginning to feel the burden of an over-abundance of university graduates who cannot find jobs.

From 30 to 40 per cent of "Ram" graduates currently cannot find work.

Nevertheless the university remains bound by law to accept all qualified applicants and provide a shot at higher education for anyone willing to "unflinchingly" carry on the burden of independent study with minimum classroom guidance", according Banphot Virasai, writing in a regional institute of higher education publication.

"The idea springs first from the dream that higher learning should be made readily accessible to all those who hanker after it", he wrote. Although some criticize sinking valuable educational resources into the majority of Open University students who never complete their degrees, advocates claim that the determined students will succeed. And that all education - even for those who cannot graduate or find jobs in their field - adds to the quality of life for everyone in the nation.

"There's a mismatch between university graduates and employment in many developing countries," and Dr. Selim of UNESCO, "following the universality of primary education. There is a philosophical question as to whether higher education is meant for job training or to fulfill the social demand for it. Anyhow, for those without jobs the future is not sealed. One day they may have them."

Thailand and other developing nations know that economic development in the Third World is raising the demand for education. They are trying to meet that demand. Ramkhamhaeng is in the vanguard of that process.



SUMMARY REMARKS*

Conference Participants, Ladies and Gentlemen :

Time flies. The five days' time of our Conference passes very quickly. As General Secretary to the Conference, it seems to me that the Prime Minister just came yesterday to perform his gracious opening ceremony. And the Rector of Ramkhamhaeng University just gave his warm welcome speech to all participants in this luxurious hall.

Though the time is quite short, I hope it's long enough to stay in our memory. Still it's long enough for us to deepen and strengthen academic understanding among our countries and universities.

As General Secretary to the Conference, may I use this opportunity to report to you on certain points.....

During the past five days, many things have happened academically. 200 participants from 18 countries around the world have registered for the Conference. It is interesting to note that 33 are from Europe, America, Canada, other countries in Asia, as well as from the Pacific. Some of them bring their families adding another 50 to our members.

During the Conference, one keynote address and five keynote papers have been presented in a variety of ways by our international prominent speakers who are well known in their professions.

Nine outstanding commentators have done excellent jobs on their personal academic beliefs. And some of them have been stimulating and creative, as well as enjoyable.

24 institutions and experience papers have been delivered to the Conference as supporting ideas, by our participants whose experiences both local and international are broad and varied.

A dozen interesting questions have been raised from the floor. A number of answers and practical suggestions from our distinguished speakers and paper presenters have been highly regarded.

Outside our Conference Room is the colorful and well-organized exhibition on distance learning materials and books on Open Higher Education. This educational exhibition is made possible by SEAMEO, the Department of Teacher Training, Ministry of Education, the UNESCO office in Bangkok, Radio and T.V. Service of Ramkhamhaeng University and many commercial bookstores in Bangkok.

The two open universities have been visited for the purposes of allowing our participants to feel the atmosphere of open learning in action and to see the waves of students, thousands and thousands, in the sea of gigantic classrooms.

Two social gatherings have been set up for participants to meet people from different lands, to exchange ideas and views as well as to observe some aspects of our culture in order to bring us close together.

Today's morning session just past would allow you as participants to bring together the ideas gained from the conference. Our rapporteurs worked very hard to organize the ideas in good order. It also provides the opportunity to say something left unsaid from the previous days. 14 chairmen and chair persons have done wonderful jobs. Even though some of them have been notified only a few hours in advance. This was the result of emergency. But all of them are well qualified indeed.

*Dr. Pat Noisaengsi, Secretary - General to the Conference, Ramkhamhaeng University, Bangkok, Thailand

We would like to inform you also that the papers presented to this conference will be published in the Proceedings of the conference, at your permission, of course. It will serve as the most complete and comprehensive Readings on Open Higher Education, since there are as many as 30 papers from 18 different countries around the world.

Ramkhamhaeng University has planned this conference for all of us. We have put in a lot of effort, and pooled at least 200 staff members, both teaching and non-teaching, to help organize this. They have worked hard one way or another. We are proud of them. We are also happy and very pleased indeed to have your full participation.

Ladies and gentlemen, during the conferences, many things have said, many good things which I have from our guests and participants.

As General Secretary to the conference, I feel very grateful to participants and the organizing committee as a whole for their help in making this conference a success. The credit which we may have earned should belong to all of us.

Above all, one more thing that I want to tell you is that there is one person who is behind the scene of our success from the very beginning of our conference. That is Dr. Muhammad Selim who is a specialist in Higher Education to UNESCO, Thailand. He has contributed much both before and during the conference.

So before the conference comes to an end, may I call upon Dr. Selim to offer his comments as closing remarks to the conference which you are taking part.

Thank you indeed, Dr. Selim, your comments and participation on this conference have been highly regarded by our staff. We don't have anything to give you in return except a little souvenir from our heart. Mr. Rector, would you please present it to Dr. Selim?

Now the conference is coming to its end. Last but not least, we have come up to our last point, the point that we will promise and put our hands together and walk together along the road of Open Higher Education. The road is not smooth but it is worth while walking.

The common goal should be stressed in the sense that Open Higher Education is a means to education for education's sake and education for professional purpose.

At this appropriate moment, ladies and gentlemen, with your permission, may I request Rector Sukhum, the chairman of planning and organizing committee and as the host of the conference, to perform the closing ceremony by giving a closing address to the conference.

Ladies and gentlemen, the organizing committee owes much to Rector Sukhum for his remarkable contribution. Without him, I think that this big international conference would not be possible. He had a lot of decisions to make during the preparation period. He has flashed the green lights along the road to the conference. It is right for him to deserve a reward as the chairman of the committee and the chairman of the closing ceremony of the conference.

If you please, Mr. Rector.



CLOSING REMARKS*

Mr. Chairman, Distinguished Participants, Ladies and Gentlemen,

I feel deeply honoured for being asked to say a few words by way of concluding remarks about this international conference on open higher education organized by R.U. I sincerely thank R.U. for giving me this honour. I am not presenting another paper. I assure you I will be very brief.

The week-long conference is just about to close its deliberations, in effect it has. I am confident that I voice the sentiments of all of us who are here this morning and also of those who had to leave earlier when I say that R.U. has done a magnificent job in organizing the conference and by doing so has made a very important contribution to higher education, particularly to higher education in this region. Socially their hospitality is just unsurpassable. May I congratulate Rector Sukhum, Dr. Pat and their other colleagues for conceiving the need for such a conference and organizing it so successfully.

Higher education in Asia and the Pacific is at the cross-road of change and development. Seen from this prospective, it seems to me that the themes and the timing of the conference have been most appropriate. Number, quality, relevance, efficiency are perhaps some of the perennial questions in any educational endeavour. But they have assumed special meaning and significance for many higher education systems, or should I say higher education institutions in this region. This is largely due, as the Honorable Minister of University Affairs succinctly put in his keynote address on the opening day, to rapid increase in demand for higher education, increasing diversity in educational needs and scarce resource. There seems to be a race to catch up with the time. R.U. has not only been a pioneer institution to test the idea of openness in higher education into practice (I would say with success so far) rather in a newer context, it has also discharged another pioneering duty by organizing this international conference on the very important subject of higher education.

I do not intend to enter into a substantive discussion on open higher education. To make any attempt to do so will amount to carrying coal to New Castle for this is what we have tried to do during the whole week. However, the invaluable contribution of the conference, as I see it, lies in the fact that it has made possible for nearly 200 scholars and practitioners from 18 countries across four continents to meet, discuss and share their experience on some of the crucial issues affecting higher education. Five major papers on clearly defined themes and another 20 or so other papers by outstanding persons have been presented and debated on. Free, frank and open atmosphere pervaded the entire deliberations of the conference. I wish we also had some "students" from the open university systems. Maybe, I do not know that some of them were already with us.

I can see three distinct growth points or contributions of this conference. Firstly, the papers and ideas generated by the conference constitute an important resource for those involved in higher education. If I may be permitted, I would like to suggest that the conference organizers establish an editorial committee perhaps including some corresponding members to synthesise and document the rich materials so it may lead to a publication of higher order, not a customary report of a meeting. This will certainly make a valuable addition to the existing literature on open higher education.

*Dr. Muhammad Selim

Specialist in Higher Education, UNESCO, Bangkok, Thailand.

Secondly, distance education and the open structure associated with it is spreading very fast in the region. For example, it is only during the last fifteen years that R.U. and STOU of Thailand, AIOU of Pakistan, the Central Radio and Television University of China, the Open University of Sri Lanka, the University of the Air of Japan, the Correspondence University of the Republic of Korea, the Andhra Pradesh Open University in India have come into existence. They together enrol about 2.5 million students which is roughly 1/7 of the total enrolment in higher education in the region. The present conference has pointed to the need and opened up the possibility of greater cooperation among various institutions and individuals for follow-up workshops and cooperation research on specific aspects of open higher education on regional, sub-regional and national levels. Let's hope the momentum created by this conference will not stop.

Thirdly, with your permission may I make a very brief reference to one relevant programme of UNESCO in higher education. UNESCO ROEAP has initiated a regional co-operative programme in higher education for development in Asia and the Pacific. The major emphasis is on three clusters of activities related to (1) innovation, (2) policy, planning and management and (3) special research studies in higher education. The programmes are developed, implemented and evaluated by three consortia of higher education institutions. At present more than 60 institutions of higher education (including R.U.) nominated by 15 Member States are participating in the programme. One of the priority projects of the consortium on innovation is concerned with distance and open higher education. The findings and recommendations of the present conference will be of great value and interest to the regional programme in higher education.

On the first day, Dr. Elton was somewhat uncomfortable as he did not find anyone apparently disagreeing with him. At the end of the week it has emerged that while there are some common characteristics, a wide variety is to be found in the interpretation of what the open system is all about, the perspective in which the objectives are conceived, the way the programmes are run and the products evaluated. Variations exist not only between the countries but also between the institutions in the same country. To me, these diversities are the real strengths of the systems as they operate within the realities of particular cultures and meet particular needs. Let the definition of open higher education remain open for the time being to see what shape it takes when we next meet.



CLOSING ADDRESS*

Dear Conference Participants :

On behalf of the Conference Committee, I would like to express my grateful thanks towards your full co-operation and participation in the International Conference on Open Higher Education between 13-17 August 1984. Your wide experience and profound knowledge have contributed great benefits to all participants.

I am certain that this five-day conference has created for scholars, academics, and educators opportunities to share experience, knowledge and exchange views on higher education. Not only has Ramkhamhaeng University achieved its goal but also each one of the participants has attained a certain insight which will help pave the way to achieve a purpose in terms of open higher education.

Once again, I would like to iterate that I am deeply appreciative of your co-operation and participation without which this conference would not have been able to become a success.

* *Prof. Sukhum Nualikul, Rector, Ramkhamhaeng University, Bangkok, Thailand*

APPENDIX

International Keynote Speakers

Keynote Speaker I**Dr. Lewis R.B. Elton**

Dr. Elton is Professor of Curriculum Reform in Science, Academic Staff Development, Teaching and Learning Methods, at the University of Surrey, England.

Dr. Elton received his B.Sc. and M.A. in Mathematics and Ph.D. in Theoretical Physics. He also has his DSc. in Physics and has post graduate training in Education at Cambridge.

Professor Elton is a member of numerous professional societies, Fellow of the Institute of Physics, Fellow of the Institute of Mathematics and its Applications, Fellow of the American Institute of Physics and many others.

As a professor of Science Education, and head of the Institute of Educational Development, Dr. Elton is in charge of all activities of the Institute. He is also a visiting professor who participated in various overseas conferences and discussions such as Malaysia, Australia, United States, and Denmark. His overseas projects and experience included a Staff Development Programme in Thailand, Malaysia and Singapore, a Consultancy to the Institute of Advanced Studies on interdisciplinary Teaching and Research in Malaysia, and lectures and research discussions in Austria and Bulgaria.

Keynote Speaker II**Dr. Robert McCaig**

Dr. Robert McCaig is Director of the Institute for Higher Education at the University of New England in Australia. He holds the B.A. degree (Honours in History), the B.Ed., Diploma in Educational Administration and the Ph.D. His career has spanned both teaching and administration, having been an adult education extension officer, a senior university administrator and more recently a teacher in higher education. He has written extensively on issues in higher education and is on the editorial boards of the Indian Journal "University Administration", the African Journal of Educational Management, and is on the permanent review panel of the OECD journal "Institutional Management in Higher Education". Dr. McCaig has been a resource person for UNESCO and a consultant to universities and institutions in South East Asia, as well as in Australia. As Director of the Institute for Higher Education, his major concern is with the development of the practical skills, knowledge and understanding of administrators and teachers already working in our universities and colleges, so that they can provide a better service to their students and their organisations.

Keynote Speaker III

Dr. Udom Warotamasikkhadit



Dr. Udom Warotamasikkhadit is Professor of Linguistics, Faculty of Humanities, Ramkhamhaeng University. He received his B.Ed. with honors from the college of Education, Prasarnmit, Bangkok, A.M. in Educational Administration and A.M. in Linguistics from the University of Michigan, and Ph.D. in Linguistics from the University of Texas at Austin. He was also a postdoctoral fellow in Linguistics at MIT.

Dr. Udom's previous positions include Associate Dean of Humanities and Social Sciences, the College of Education, Phranakhon, Dean of Humanities, Ramkhamhaeng University; Vice Rector for Planning and Development, Ramkhamhaeng University; UNHCR Project Director for Teaching English as a Second Language and Cultural Orientation. He was a Fulbright Visiting Professor at the University of Pittsburgh and Research Scholar at UCLA, and one of the founders of Ramkhamhaeng University, the first open university in Thailand.

*Keynote Speaker IV***Dr. Michel Debeauvais**

Dr. Michel Debeauvais's academic background is in Humanities, Political Science, Economy, Public Administration, École Normale Supérieure, and École Nationale d'Administration.

He has long and varied experience in teaching, research and administration, having been a Professor of Human Resource Planning and Director of the International Institute of Educational Planning, Paris. He is President of the World Council of Comparative Education Societies and Director of the Research Center of Educational Policies at the University of Paris. Professor Debeauvais has been involved in Consultancy missions, teaching and lecturing in Asia, Latin America and Africa. His main publications deal with Educational Planning and Policy, Manpower Assessment and Forecasts, Innovation in Higher Education and Comparative Education.

*Keynote Speaker V***Dr. Lloyd E. McCleary**

Dr. McCleary is Professor of Educational Administration and Director of the R/D Lab, the University of Utah. He has served as a public school administrator in Oregon and Illinois and as a department chairman at the University of Illinois and the University of Utah. He is the author of seven books and numerous articles and research reports. A current R/D project involves the development and testing of learning modules for the field-based preparation of administrators and supervisors. His expertise includes programme design, programme and personnel evaluation and middle management.

Dr. McCleary has directed projects for the U.S. Department of State's Trade Development Program and its Agency for International Development, Department of Defense Dependent Schools, the Academy for Educational Development, the National Association of Secondary School Principals and various foundations including the Rockefeller Family Fund, CFK Ltd. (Kettering) Foundation and the Fund for the Improvement of Education. He is an associate of the Anglian Regional Management Centre, Danbury, England, the editor of the *Notebook* which serves the National Conference of Professors of Educational Administration and is a member of the editorial boards of *School Management* and the University Council for Educational Administrator's Monograph Series, and is on the Board of Directors of the University of Utah's International Center for Human Resource Development.

